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The Oil Man's Calendar

SEPT. 30	American Gas Association, San Francisco.
OCT. 1	American Gas Association, San Francisco.
2	AIME Regional Meeting, St. Louis.
5– 9	National Safety Congress and Exposition, Chicago.
8–10	Texas Mid-Continent Oil and Gas Association, Dallas, Texas.
12–14	American Society of Mechanical Engineers, Rochester, New York.
12–17	AIME, Petroleum Division, Los Angeles.
19	National Stripper Well Association, Wichita, Kansas.
20–21	Independent Petroleum Association, Wichita, Kansas.
29–31	AIME, Petroleum Division, Austin, Texas.
30–31	Illinois Mineral Industries Conference, Urbana.
NOV. 5– 6	American Association of Petroleum Geologists, Los Angeles.
6	California Natural Gasoline Association, Los Angeles.
9–13	American Petroleum Institute, Stevens Hotel, Chicago.
16–18	American Institute of Chemical Engineers, Netherlands Plaza Hotel, Cincinnati.
17–21	National Chemical Exposition, and Industrial Conference, American Chemical Society, Chicago.

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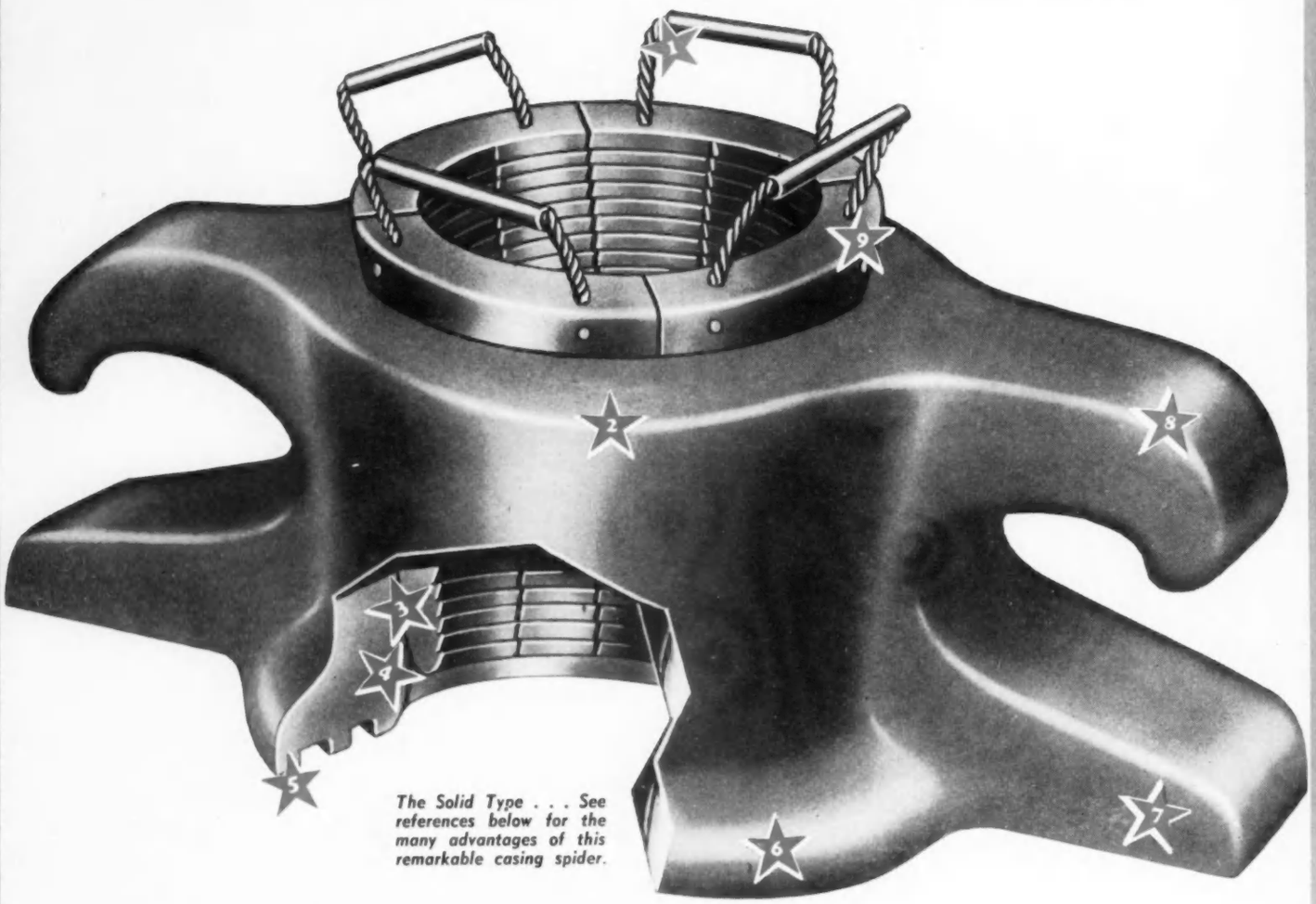

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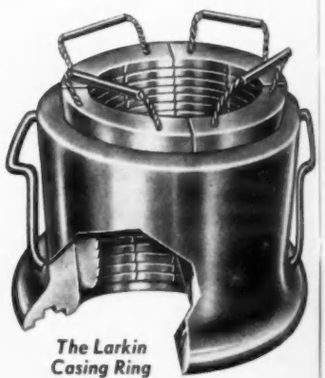

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The Changing Panorama

DeGolyer Promotion a Wise and Happy One

SELECTION of E. DeGolyer, internationally known petroleum scientist and independent oil man, as a deputy coordinator in the Office of Petroleum Coordinator Ickes was a very happy one. DeGolyer is known as a fair-minded man, a highly intelligent oil man and a person well supplied with diplomatic talent. He is not lacking, also, in certain qualities of firmness.

DeGolyer has been Director of Conservation in the Office of the Petroleum Coordinator, and in that job has been greatly concerned about the nation's sagging exploration campaign and conservation phases. It is understood his new duties will involve the work of studying and encouraging exploration activities.

His department of conservation has been very active recently in seeking data on which new reserve calculations can be made. Questionnaires sent out from his office have requested a mass of material, some of which has been considered highly confidential in the past. The questionnaire did not make a great hit in many quarters and the feeling has been expressed that DeGolyer was seeking information which should be guarded with greater secrecy than would be practical under the manner in which it would be handled. This feeling has led to the suggestion that DeGolyer has been seeking a considerable power which many oil companies objected to being given to any individual.

It is THE OIL WEEKLY's conviction, however, that DeGolyer has had some rather definite ideas as to the national value of the information which could be obtained from questionnaires and that a genuine service to the country ultimately will be rendered through the analysis of these data. It is possible we may find that our reserve situation is somewhat better than has been thought. Of course the questionnaires referred to have imposed a great burden on oil company staffs which have been decimated by the war and already overburdened with additional work, and it would be our suggestion that the man-hours available in the technical staffs of oil companies be carefully considered before other time consuming work be required by OPC.

There are certain other factors to take into consideration in DeGolyer's new job. Texas has been one of the problem children of the OPC and a negotiator from OPC coming from another state will have greater difficulty in negotiations than a Texan, well known and well liked in the state. It should not be forgotten that DeGolyer is a holder of the Distinguished Service Award from the Texas Mid-Continent Oil & Gas Association, an organization composed of Texas majors and independents alike. Already his appointment seems to be bearing some fruit in Texas.

DeGolyer certainly has the ability—and he has no crack-pot ideas of economics and government. His commonsense thinking in the past has been combined with brilliance of conception to get excellent results. If his elevation to the position of deputy coordinator does not aid materially in carrying out the difficult work in the Office of the Petroleum Coordinator, we shall be badly fooled.

The name of William B. Heroy, well known and respected geologist of Houston who currently is with the Bureau of Economic Warfare, is being mentioned as possible successor to DeGolyer as Director of OPC's Conservation Division.

Spacing of Wildcats Needs Scaling Down

DESIGNATION by Conservation Order M-68 of a wildcat test being one that is two miles or more from production is too severe for most areas. Out of the 90 or more new fields discovered in Illinois during the past five years, less than a dozen of the discovery wells have been two miles from production. Many of the smaller fields could be paired and the two spanned by a two-mile caliper without contact or indication of oil at any point. These figures cover only fields at present defined, known to be separate units, not merely as yet unconnected portions of larger pools.

Present provisions of M-68 stating in effect that each successful wildcat automatically becomes the center of a field with a minimum area of 3-1/7 square miles, or 1989 acres, is too high for Illinois and many other areas. This throws an unnecessary burden in the form of additional delay, permits, exceptions and what-not in the way of the wildcatter who might desire to prospect beyond the probable bounds of the newly discovered pool, but within the "foul lines" setup by the 2-mile limitation of M-68.

Generally speaking, most of the regions which are characterized by small closely-spaced fields are shallow. Scaling down of wildcat spacing according to average hole depths from the current 2-mile definition would tend to increase the possibility of boosting wildcatting, especially in shallow territories, where less steel is required than in deep regions, and where overall costs are lower.

Changes Indicated by Acute Fuel Oil Status

AT NO time since Pearl Harbor has the production of residual fuel oils anywhere near approached the demand level. United States stocks of this product have declined 17⅓ million barrels since the first of the year, and the total quantity currently in storage amounts to 78,478,000 barrels, or 14,803,000 barrels less than a year ago. The draft on stocks continues, although this is contraseasonal. During the four weeks ended June 20, these inventories were reduced by a million barrels.

The bulk of the nation's residual fuel stocks are located in California, but despite still having 55⅓ million barrels in storage in this region, the West Coast situation is causing concern. In the first place, demand is rising more sharply than output. California's heavy-fuel demand during April this year was

366,000 barrels daily compared with 316,000 barrels the preceding month and 295,000 barrels in April, 1941. Although 23,000 barrels a day more fuel oil was processed at refineries in April than in March, the demand was still 58,000 barrels per day greater than production. California stocks have been drawn upon for 7,470,000 barrels since the first of the year, and now are 10,768,000 barrels below the storage level of mid-June, 1941.

The heavy fuel situation is made more acute because much of the quantity stored in California is of doubtful nature. A large portion of the quantity on hand has been in storage for many years, and is practically unrecoverable because it would have to be almost "mined" to get it out of sumps, etc.

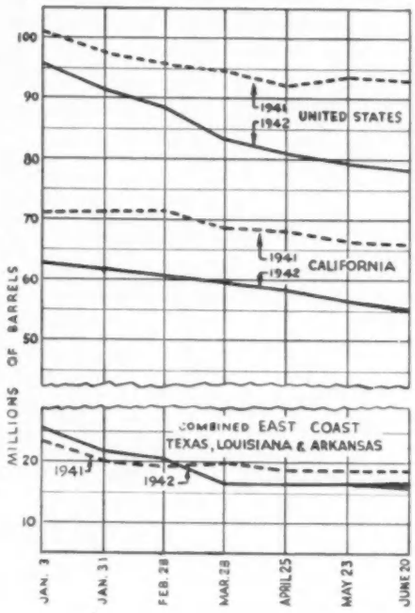
Although stocks of heavy fuel in the combined East Coast and its principal supply area of Texas, Louisiana and Arkansas at the start of the year were 1½ million barrels larger than a year ago, today these stocks are 1,995,000 barrels below the level of a year ago.

Neither California nor the Southwestern district have available large producing sources of additional heavy crudes that yield large percentages of residual fuel.

With these trends it becomes necessary that steps be taken to increase the output of heavy fuels, which means that both crude oil production and refining operations must be adjusted to provide larger quantities of the product. Existing conditions make this more difficult to do than normally, even when the shortage of new sources of heavy crudes is dismissed. It cannot be done by simply boosting total crude runs to stills, for this would cause excessive additions of other products to storage. Neither can it be accomplished in such a fashion as to restrict production of high-octane gasoline, toluene and other war products. Consequently, both production and refining operations must be regulated with care.

Therefore, the next few months will see the industry move rapidly toward a more full wartime product basis. The District 3 program for Gulf Coast refineries (THE OIL WEEKLY, April 27) probably will be extended to inland Texas-Louisiana refineries as well as to California. Crude production will be allocated to specified refineries according to the products each plant is concentrating on, aviation-base crudes going to those equipped for

Heavy Fuel Oil Stock Trends



processing it and heavy crudes to those specializing in the manufacture of this product. This foreshadows that further reshuffling of individual field production rates according to the type of crude produced, is in the immediate offing. Some fields producing undesired crudes may even be shut in completely, while others will benefit.

Eastern Fuel Users Converting to Coal

WITH the industry frankly and openly asserting that there probably will be insufficient heating and industrial fuels on the East Coast in the winter of 1942, the sale of oil burners has declined sharply and industrial consumers of heavy fuel oil are converting to coal in sizeable quantities.

The number of oil burners shipped during April, 1942, was 11,600 as compared with 14,412 in the preceding month and compared with 22,819 in April, 1941. Manufacturers whose data are included in these statistics represent approximately 90 percent of the burner output. Statistics are for burners used in homes, churches, office buildings, apartments and the like.

In addition to the drop in sales of burners, many are voluntarily converting from oil to coal. Statistics are available only on heavy fuel oil user conversions, which is not to be confused with light heating oils generally used in homes. A total of 19,628,000 barrels per year consumption had been converted by 520 firms by June 12. This represented an increase of 4,028,000 barrels in the two weeks since May 27, when 446 concerns burning 15,600,000 barrels per year reported they had converted. It is estimated by OPC that another 23,480,000 barrels of heavy fuel can be saved per year by further conversions.

The industry's frank stand on the situation is largely responsible for the conversion, for which the industry is to be commended. So that homes may be sufficiently heated this winter, the oil industry is deliberately sending customers to its biggest fuel competitor—coal—although it realizes the difficulties of getting the customers back after the war. Few will remember that the change was suggested for the benefit of the nation's war effort and for their own individual good, both at the expense of oil itself.

Army Figures Reveal Huge Rubber Needs

MINIMUM need for rubber for military and absolutely essential civilian needs up to the end of 1943 will be 1,092,000 tons, it was disclosed last week with release by a House Appropriations Subcommittee of the testimony of Army officials on the $40 billion military bill for the War Department.

Against this figure of needs, given by Brigadier General L. D. Clay of the General Staff Corps, there is available approximately 841,000 tons, mostly crude rubber on hand and some imports which have not yet reached the United States.

General Clay said that some small amount of synthetic rubber is included in the figure on available supplies, but expressed doubt that output over the next 18 months would come within 25 or 30 percent of the 328,000 tons estimated. Not more than 700 tons of guayule rubber can be produced in the next 18 months, he figured, and the cost will range from around 72 cents a pound if the shrub is cut at the end of two years, when it will yield about 320 pounds per acre, to 23 cents if cut at the end of four years, when a yield of around 1200 pounds per acre can be had.

☆ ☆ ☆ ☆ WASHINGTON ROUNDUP ☆ ☆ ☆ ☆

By B. F. LINZ
Washington Correspondent

Ickes Urges House to Enact War Corporation Bill

"Big Inch" Company Organized And Ground Surveys Start

Gas Well Spacing Relaxed in Northern Mid-Continent

WPB Approves Many Pipe Line Relocation Projects

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WITH the industry's salvage drive progressing quite satisfactorily, according to PIWC Chairman William R. Boyd, Jr., but less so, according to Coordinator Ickes, rubber was the outstanding subject of discussion in Washington last week (see pages 12 and 13).

Developments in rubber included Senate agriculture committee approval of the Gillette bill establishing a rubber-supply agency and for production of rubber from grain; assurances to a Senate mines' subcommittee that, given priorities, $100,000,000 and a year's time, grain alcohol producers could turn out all the rubber the country needs; and announcement by the War Department of plans to initiate field tests of synthetic tires.

The week also saw the first concrete action toward enactment of the Connally-Steagall war petroleum corporation bill, with opening of hearings by the House banking committee at which Ickes described the problems of oil, including transportation, production, financial and others, which must be solved.

As the House committee prepared to go into what promises to be lengthy hearings on the corporation bill, the Senate commerce committee announced that it would open hearings June 29 on the Mansfield bill for development of the inland-waterway system and construction of a trans-Florida pipe line.

During the week, OPC announced its recommendations for July production (see page 41) boosting the total nearly 200,000 barrels a day over June and disclosed that actual surveys of the route of the Longview-Salem pipe line had been initiated with pipe layers due to follow closely behind as deliveries of pipe begin early next month.

As the week ended, it was disclosed that WPB has taken favorable action on the pipe line relocation projects recommended by OPC and had given ratings to perhaps a score of the 32 pipe line moves involved in the five-point program approved by the oil coordinator.

☆

OIL CORPORATION: The Connally-Steagall bill setting up a $500,000,000 oil corporation to relieve distressed units in the industry is not a subsidy but merely a means of spreading excess war costs over the country as a whole, the House banking and currency committee was told June 25 by Coordinator Ickes at the opening of hearings on the measure.

"Unless the government were prepared to take over the oil industry and run it at a loss, this is probably the only effective way of assuring continuously and adequately the supplies of necessary petroleum products with which to win the war," Ickes declared.

Disclosing that the bill had been drafted by the legal department of OPC at the request of Senator Connally and that he, himself, had not asked for the legislation, Ickes supported it as a solution of "present and prospective wartime shortages of petroleum products while at the same time preventing the threatened elimination from the petroleum industry of the small independent producers, refiners and marketers.

During the questioning of the coordinator, members of the committee revealed an apparent lack of knowledge of conditions in the oil industry, devoting much of their examination to the question whether the proposed relief should be termed a "subsidy," attempting to explore the relations between OPC and the price administration, and inquiring why the Reconstruction Finance Corporation could not perform the same functions under its lending authority.

The approach of the committee to the problem indicated that the hearings would be long drawn out and would explore many questions other than the fate of the oil companies if costs of products are permitted to continue to race far ahead of return.

Ickes told the committee that the motor fuel and other by-products which are piling up in the making of military products ought not to be burned or poured on the ground but, rather, "should be stored against the day which is likely to come sooner than later when they will be needed both to fight the war and to supply the American consumers."

While in some areas it is necessary to produce a greater volume of crude than the sum total of the derived products which can be used or transported, in order to get the specialties needed by the military service and essential industries, in other sections it is necessary to stimulate additional production of certain special crudes, as on the West Coast, where the large demand for additional Navy fuel oil requires the production of more heavy crude.

"Here it is the old pumping wells which have reached the stripper stage that must provide the answer," he explained. "But these wells are largely owned by hundreds of small independent operators. In order to recondition their wells, they must either be loaned funds, secured by the proceeds of the oil when produced, or they must perhaps be paid a small bonus

for increased quantities of such crude oil. Either or both of these methods of causing an increase in the production of such an urgently necessary war commodity could be quickly arranged under this act."

The coordinator stressed the greater peril of the small operator in the Southwest, caused by curtailment of transportation, and said that similar dangers confront the refineries as a result of government demands for changes in the relative percentage of various products turned out.

"Thus far, in response to my requests as petroleum coordinator, the oil refiners have shifted their operations to make more fuel and less gasoline," he said. "By reason of the present price ceilings, they are permitted to charge up to 6 or 7 cents a gallon for gasoline at the refinery gate but only 2 to 2½ cents a gallon for heavy fuel, depending upon the location of the refinery. How long can even the strongest unit continue, in effect, to convert a 7-cent product into a 3-cent product when his investment and operating costs are predicated upon maximum production of the 7-cent product? The small independent refiners can obviously not afford it at all."

There is no simple answer to the problem, he continued. A blanket increase in fuel-oil prices would keep solvent those refiners who actually make more fuel oil, but would also mean a wholly unjustifiable profit "for any companies that elected to operate on a basis of 'business as usual.'

"The legislation proposed to meet this situation appears well calculated both to avoid the evils of a blanket increase in the prices of necessary petroleum products and at the same time provide a means whereby the supply of such products in the right proportions may be assured. It empowers the government to buy particular products like fuel oils at a price which may include the cost, and no more than the cost, of increasing the yield of such products. It requires the government to put such products back in the channels of trade at prices no higher than those generally prescribed by the price administrator, thereby assuring the necessary supply and, at the same time, avoiding both inflationary measures and discrimination against any particular section of the country."

The coordinator explained that the cost of transportation, formerly around 20 cents a barrel from Texas to the East Coast, is now approximately $1.67 by rail, on fuel oil selling for about 85 cents a barrel on the Gulf and delivered to the consumer in the East at $1.80 a barrel. Some price adjustments have been authorized by OPA, but they provided only partial compensation.

"It is all too obvious that this cannot long continue," he asserted. "Indeed the small independent marketer and distributor are already dropping by the wayside. During the last few weeks instances of impending bankruptcy have been presented to my office by independent distributors in New England, the Middle Atlantic states, and as far south as Georgia and Florida. As they drop out, their facilities for serving the public with absolutely necessary fuel oils and other petroleum products will either go with them into disuse or be bought up by the large companies. Yet even the large companies will not be able to stand the drain of paying out more cash than they receive for any very protracted period and certainly not for as long as the war is likely to last.

"Certainly," he concluded, "unless positive action is taken, we must all steel ourselves to face a whole series of probably unnecessarily stringent rationing orders and perhaps actual shortages of petroleum or some of its products for direct military use."

Ickes explained that the proposed war petroleum corporation would be charged with the specific duty of securing the delivery of supplies of oil and products into shortage areas to meet military and essential civilian demands; to secure the expansion and most efficient use of petroleum transportation facilities; to provide for the production of the necessary amounts of the specific products required for the war program and to meet essential civilian needs; to bring about the maintenance of adequate reserves of crude or products as are of strategic importance in quality or as to location, and to procure the return, upon such terms and conditions as will protect the public interest, to the natural underground reservoir or other disposition of products purchased by the corporation for the purpose of assuring the production of other essential products.

"For the sole purpose of accomplishing these objectives," he said, "the corporation would be empowered to make secured loans, to purchase and sell petroleum and products, to transport and store petroleum both above and underground, and to pay transportation charges covering the movement of petroleum products.

"Although the corporation would be permitted to purchase petroleum products from producers at prices in excess of those prescribed by OPA, the corporation would be prohibited, in making purchases or paying transportation charges, from paying more than is necessary to cover the actual excess cost experienced by the operator as a result of complying with governmental directions with respect to the quality or quantity of the oil or its products produced or means of transportation employed. This provision of the bill would not only prevent unjust enrichment of any person or company but also would tend to hold to a minimum increases in the existing price ceilings on petroleum and petroleum products."

Asked by chairman Steagall to explain the authority he exercises over the oil industry, Ickes said he did not know just what authority he had, but said he has not "had much difficulty in getting along because of the ready cooperation of the industry."

He said OPC, since its establishment May 28, 1941, has received about $1,750,000 for expenses of all activities, and now has about 500 employes. Within the next year, he said, it will be necessary to increase the staff by about 200 and if the bill is enacted another 100 persons will be required for its administration. He, himself, is devoting 75 to 80 percent of his time to that phase of his work.

At the moment, he said, the East Coast is getting about 730,000 barrels of oil daily, less than 10 percent of it by tanker and 8 percent by barges.

The subject of subsidy was pressed by Representative Wolcott (Rep.) of Michigan, who spent more time in airing his own views than in asking those of the coordinator, finally drawing from Ickes a sharp statement that he was not appreciative of the harangue and

would be glad of an opportunity to answer questions.

"I am not here pleading for the oil companies," he reminded the committee. "I am here asking you to help us get oil out and where it is needed. I do not see why the government, including Congress, should see to it that no other industry necessary to the war program should operate at a loss and not extend the same treatment to oil."

While representatives Patman of Texas, Boggs of Louisiana and others from the producing states said they had received many requests for the legislation, members on the Republican side sought to discredit the bill as an outright subsidy to a prosperous industry, apparently on the basis of representations from independent operators that the measure was the opening wedge for government control.

Epidemics may follow the cold homes that will result from failure to bring adequate heating oil supplies into the East next winter, the committee was warned June 26 by Mayor F. H. LaGuardia of New York.

LaGuardia gave unqualified support to the bill, but suggested that it be amended so as to over-ride any state barriers that might interfere with truck or other transportation of oil.

He told the committee that "equal rationing of oil throughout the country" should be adopted as a means of increasing supplies for the East, but did not elaborate upon that suggestion.

☆

BIG INCH: Ground surveys to determine the exact route of the "big-inch" pipe line were started during the week, giving rise to some question whether the northern terminus would be located at Salem, Illinois, or some other point in that state or Indiana.

Announcing the first concrete step toward construction, Coordinator Ickes said the line would be built for the government by War Emergency Pipeline, Inc., a new name for the National Defense Pipe Line Company which was chartered in Delaware last September to finance, build and operate the proposed 24-inch line from Texas to the New York-Philadelphia refining area.

The corporation is an organization of Cities Service Oil Company,

W. Alton Jones (right) and B. E. Hull, president and vice president respectively of War Emergency Pipeline, Inc., which will build and operate 24-inch system between Texas and Illinois.

Standard Oil Company of New Jersey, Consolidated Oil Corporation, Sun Oil Company, The Atlantic Refining Company, Socony-Vacuum Oil Company, Tide Water Associated Oil Company, The Texas Company, Gulf Oil Corporation, Pan-American Petroleum and Transport Company, and Shell Oil Company.

President of War Emergency Pipeline will be W. Alton Jones, president of Cities Service Oil Company. B. E. Hull, president of The Texas Pipe Line Company, was selected as vice president and general manager, and will supervise the actual construction. C. I. Thompson of Philadelphia will be acting secretary and general counsel.

The ground survey parties are scheduled to enter the field near Longview, Texas, to stake out the route, which will take about 30 days to complete, but it is expected that the actual laying of pipe, 140 miles of which is scheduled for delivery by National Tube Company during July, will be started before the survey is completed.

☆

SPACING: Legislation eliminating all federal restrictions on drilling was introduced in the Senate June 26 by Senator Scott W. Lucas of Illinois, who asserted that the

OPC spacing order has caused a decline of 113,000 barrels a day in Illinois production and "practically" forced independent operators out of business.

Lucas wrote his bill as an amendment to the legislation for development of the inland waterways and construction of the Florida pipe line, which comes up for hearings before the Senate commerce committee June 29.

The measure would take away the authority of OPC, or other federal agencies, to control wells under 3300 feet in depth, and would also prohibit any control of drilling of new wells where the equipment for such drilling is available.

☆

NATURAL GAS: In a move to meet the increased demands of war industries for gas from the shallow areas of Missouri, Oklahoma and Kansas, WPB last week authorized the drilling of additional wells in those states.

At the recommendation of OPC, WPB authorized drilling on units of less than 640 acres in all of Missouri, 43 counties in Kansas east of Range Two and east of the Sixth Principal Meridian, and in 17 counties in Oklahoma.

About 2900 wells are now producing gas in the area, it was said, but to meet the local demand it is estimated that another 800 wells

[*Continued on page 38*]

Survey Indicates Large Supply Of Scrap Rubber

THOROUGH search of the homes and farms of all families in the United States for discarded, worn-out, or unserviceable rubber items should yield no less than 225,000 to 250,000 tons of rubber scrap, which would be enough to operate the nation's rubber reclaiming facilities at capacity for 8 months. This calculation, which does not take into consideration the hundreds of thousands of tons in industrial and commercial establishments and in the hands of junk dealers, is based on the experience of employes of The Gulf Publishing Company of Houston, publishers of THE OIL WEEKLY, in an all-out effort to find and turn in every ounce of rubber scrap available strictly within the homes and premises of those employes.

In fact, if the search of homes for scrap rubber throughout the nation were to yield as much rubber per person as did this group, the quantity made available would be 316,000 tons, for this group furnished an average of 4.8 pounds for every person, adult and child, in their homes. That average was achieved despite the fact that 16 percent reported that they had absolutely no rubber to supply, the data on those having been embodied to provide a true survey of a section of the population. The average was established, in spite of the fact that the employes lived predominantly within a city of 400,000 population, where garbage collections had encouraged disposal of discarded rubber goods, although there was some representation of families living in the suburbs and on farms.

Probably helping to make a good showing in the survey, however, was an above-average number of automobile-owning families in the company as well as in the city involved. Whereas there is 1 passenger automobile for 4.5 persons in the United States as a whole, there is 1 car for every 3.6 persons in Houston and one car for every 3.1 persons in the families of the employes surveyed.

THE scrap rubbed survey described in the accompanying article was planned before President Roosevelt announced the national rubber collection campaign, for the purpose of making an estimate of the amount of scrap rubber in the homes of the United States. Upon announcement of the collection campaign, the survey was made a part of the national scrap drive. Scrap turned in by employes of The Gulf Publishing Company was all donated, with the understanding that proceeds from its sale would be used for charitable purposes.

For every car owned within the group discussed, there was an average of 15 pounds of rubber, including that brought in by "no-car" families. And if that same quantity were gathered for each of the approximately 29,000,000 passenger automobiles throughout the United States, the take-in would be 218,000 tons of scrap. But the country as a whole should have a higher average of scrap for each car than did this group, inasmuch as there are more persons for the average car of the nation than there are per car in this group.

Separation of the surveyed group into car-owning and no-car families indicated that the rubber strictly from within the car-owning families averaged 14.2 pounds per car owned, and application of that average to the nation's 29,000,000 cars indicates that 206,000 tons of rubber scrap should be available from only the homes of the families owning cars. This assumes that the proportion of families owning more than one car would be about the same for the nation as it was for the surveyed group.

The 206,000 tons would be exclusive of rubber in the several millions of homes where automobiles are not owned. In the Houston group, "no-car" families brought in an average of 7.3 pounds of rubber per family. Estimating "no-car" families in the whole United States to total about 4,000,000 it is indicated that those families could provide 15,000 tons of rubber goods, to go with the 206,000 from car-owning families, for a total of 221,000 tons.

The above calculations probably are extremely conservative, inasmuch as results in this survey, as well as reports from throughout the country, indicate that a higher proportion of rural homes would have increased the average rubber donation per person, per family, or per car. Some of the employes living in the suburbs or on farms outside Houston made larger contributions than average, although others did not.

Furthermore, car ownership was no assurance of providing any rubber at all, as car owners were prominent among the "no rubber" families.

Aside from providing information on the potentialities of an all-out effort of home owners to bring in the rubber scrap, the survey here reported shed considerable light on the relative importance of the different items in the scrap picture.

In the survey, 56.1 percent of the rubber turned in represented the three major sources from automobiles, with tires accounting for 49.3 percent of the weight of all scrap assembled, inner tubes for 3.5 percent, and automobile floor mats 3.3 percent.

The automobile tires averaged 18 pounds each, while inner tubes averaged 2.7 pounds, and floor mats 5.6 pounds per mat.

The most important single item after automobile tires was garden hose, which constituted 18.4 percent of the total weight of rubber brought in.

Bicycle tires accounted for 2.9 percent and bicycle inner tubes 0.3 percent. The bicycle tires averaged 2.6 pounds per tire, and the inner tubes .8 of a pound.

In addition to the above major items, which together constituted 77.7 percent of all the scrap, there were well over 50 miscellaneous items, accounting for the remaining 22.3 percent of the total. Noticed in the boxes of miscellaneous scrap were these, among other rubber or

rubber-containing items: football bladder, door stop, fruit jar rings, bath sponge, dog bone, scalp massager, bath-tub-drain plugs, door mat, book satchel, raincoats, tobacco pouch, chair cushion, automobile-radiator hose, apron, sheet, fountain syringe, shower curtain, erasers, light wire, bicycle pedal pad, rubber gloves, bathroom mat, syringe tubing, rubber heels, lawnmower tires, galoshes, rubber boots, bicycle handle-bar grip, bathing cap, bathing shoes, toys of many kinds, dolls, golf balls, nipples, hair curlers, atomizer bulbs, art gum, bottle stoppers, hot-water bottle, toilet bowl bulb, tennis balls.

Taken into account in the survey were data covering all of the 118 employes of the company who were not out of the city on business, ill, or on vacation. A report was obtained from every employe except those, and all data are here taken into account, including that on those unable to contribute.

It is believed that the group searched out and furnished virtually all available that was classed definitely as scrap, and all that went into the survey was wholly from their homes and premises.

Questioning of some of the employes indicated, however, that they did retain some items of limited or questionable value, and that they would turn those in subsequently if it became clear that those items were urgently needed by the government.

The employes furnished pertinent information about themselves and their families on tags that were furnished for the purpose. The 118 employes together furnished 1788 pounds of rubber scrap, and they reported that the scrap came from families in which there were 369 persons, 119 automobiles, and 1 tractor. The rubber collection averaged 15.1 pounds per family, 4.8 pounds per person, or 15 pounds per car.

Among the group were 13 "no-car" families, of 40 persons, that furnished 94 pounds of rubber, an average of 7.3 pounds per family or 2.35 pounds per person.

All families owning cars totaled 105, with 329 persons and 119 cars. Those families furnished 1694 pounds of scrap, an average of 16.1 pounds per family, 5.1 pounds per person, or 14.2 pounds per car.

Among the car-owning families were 94 having 1 car each and consisting of 279 persons, that furnished 1355 pounds of scrap, equivalent to 14.4 pounds per family, 4.8 pounds per person, or 14.4 pounds per car.

Eleven families of 50 persons owned more than 1 car each, accounting together for 27 cars, and they supplied 339 pounds of rubber, an average of 30.8 pounds per family, 6.8 pounds per person, or 12.6 pounds per car. However, by eliminating two of those families that furnished around 100 pounds or more each, there were 9 families of 42 persons and 22 cars that furnished 114 pounds, an average of 12.7 pounds per family, 2.7 pounds per person, or 5.2 pounds per car, these figures having been less favorable than those for the 1-car families.

Industry Collects 100,000 Tons Of Scrap Rubber in Six Days

PIWC Chairman William Boyd, Jr., accompanied by Coordinator Ickes and Deputy Coordinator Davies, made a preliminary report on the rubber scrap drive to President Roosevelt on June 24. Boyd told the president that 100,438 tons of rubber had been collected by the petroleum industry alone in the first six days of the campaign. This was in addition to unstated amounts collected by junk dealers, charitable organizations and other groups participating in the round-up.

Scrap Rubber Collected by Oil Industry June 15-20

STATE	Tons	Lbs. Per Capita
Alabama	300	.21
Arizona	1,286	5.15
Arkansas	1,274	1.31
California	11,497	3.33
Colorado	916	1.63
Connecticut	2,500	2.92
Delaware	90	.67
District of Columbia	144	.43
Florida	1,250	1.32
Georgia	928	.59
Idaho	1,300	4.95
Illinois	4,392	1.11
Indiana	3,030	1.77
Iowa	4,125	3.25
Kansas	3,300	3.66
Kentucky	1,800	1.27
Louisiana	1,280	1.08
Maine	213	.50
Maryland	275	.30
Massachusetts	612	.28
Michigan	6,500	2.47
Minnesota	4,200	3.01
Mississippi	750	.69
Missouri	3,472	1.84
Montana	3,275	11.72
Nebraska	2,250	3.42
Nevada	653	11.87
New Hampshire	175	.71
New Jersey	466	.22
New Mexico	500	1.88
New York	1,238	.18
North Carolina	1,027	.60
North Dakota	1,000	3.12
Ohio	3,400	.98
Oklahoma	4,853	4.36
Oregon	3,255	5.97
Pennsylvania	750	.15
Rhode Island	140	.39
South Carolina	798	.84
South Dakota	800	2.49
Tennessee	2,001	1.37
Texas	7,625	2.38
Utah	541	1.97
Vermont	415	2.31
Virginia	267	.20
Washington	4,034	4.65
West Virginia	450	.47
Wisconsin	4,304	2.74
Wyoming	400	3.19
Hawaii	342	1.58
Total	100,438	1.52

By far the most successful results were being attained in the West. California had collected more total tonnage, 11,497, than any other state, followed by Texas with 7625 tons. However, in pounds per capita, Nevada and Montana were well in lead with 11.87 and 11.72 respectively. With the exception of Vermont, not a single New England state had collected an average of 1 pound per capita, and Florida was the only one of the Atlantic Seaboard states to collect 1 pound per person. Elsewhere, practically all states reported more than a pound per capita already collected.

After the meeting, however, Ickes declared the results of the drive in the East and South were very disappointing, but that the figures from the West were more satisfactory.

At the same time, he indicated that he may come around to the point of view held by officials of WPB and OPA regarding the requisitioning of rubber from civilians, declaring that the scrap-rubber drive is "putting it up to the people to determine whether they want to run their cars or not," and that if enough rubber is not turned in to take care of the military needs and some of the civilian demand "we will have to get the rubber some way."

Reports to Boyd's headquarters showed that rubber was coming in from every conceivable source and not a few inconceivable ones. From the bottom of mines, from underwater dumps and scores of other out-of-the-way spots, rubber which had been discarded over a period of years made its reappearance.

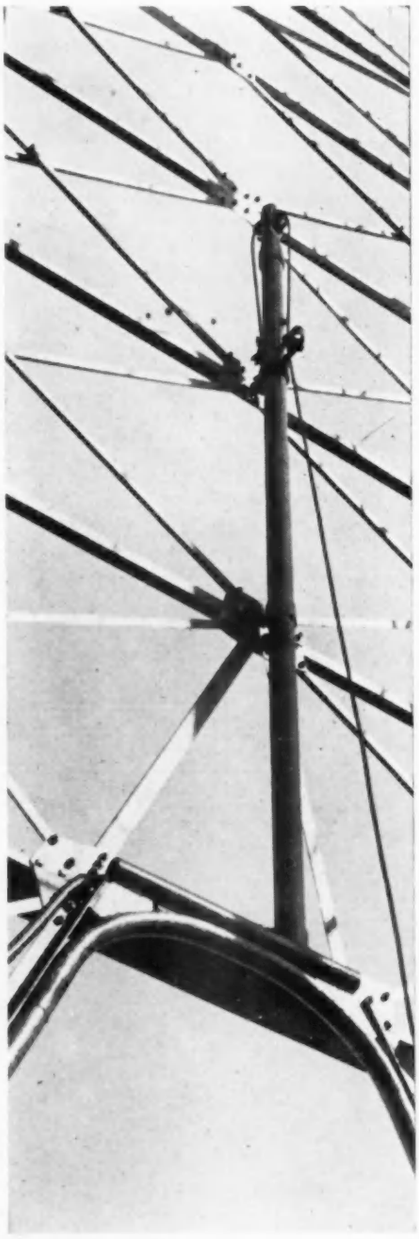
Auxiliary Hydraulic Hoist Facilitates Handling of Casing And Drill Pipe

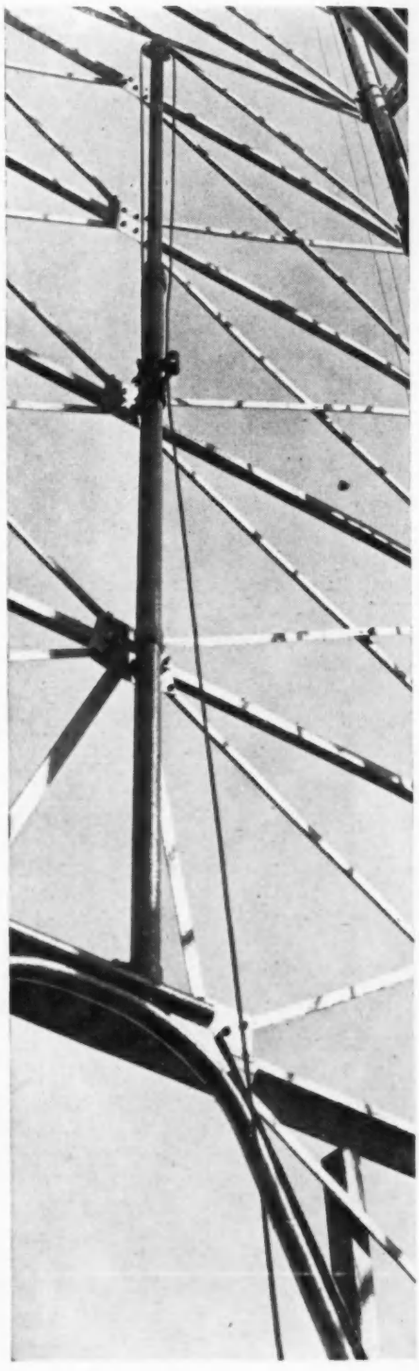
AN EFFICIENT, hydraulically operated catline hoist for handling drill pipe and casing around the derrick is used by a major company operating in West Texas. The hoist can be quickly and easily installed above the V-door in almost any type of drilling derrick with but a small abount of additional reinforcing of the girts. The simple hoist-control valve is conveniently located on the floor beside the V-door.

Outstanding advantages of this hoist include: elimination of certain hazards on the derrick floor that exist when the cathead is used for hoisting and towing services; reduction of fatigue of floor men and drillers; increase in speed of handling drill pipe and running casing; decrease in catline wear; and facilitation of handling of miscellaneous pieces of heavy equipment, since inactivity of the drawworks permits normal conversation between men above and beneath the floor.

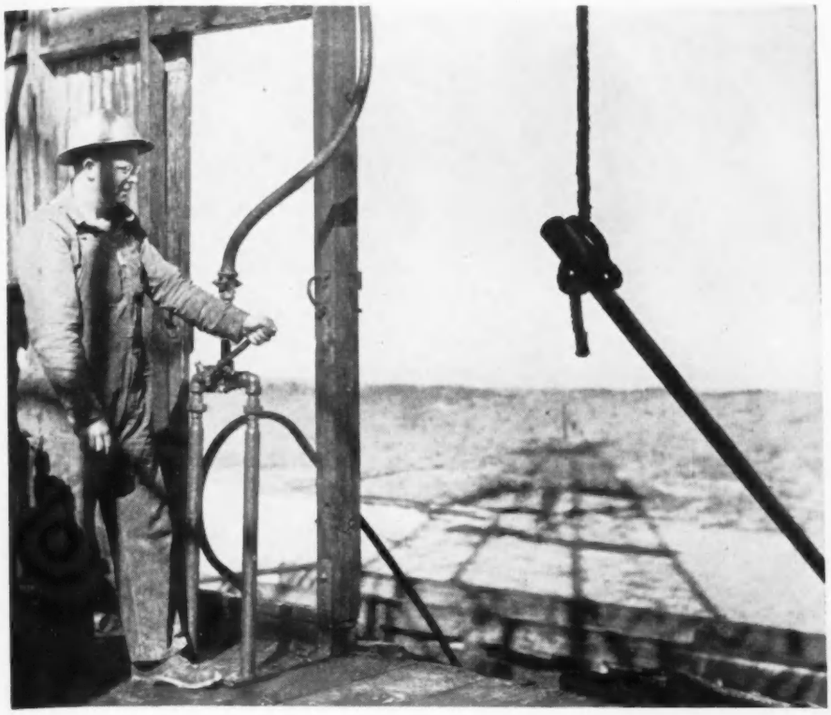
The patented device consists of a 17½-foot hydraulic cylinder, piston, and piston rod, clamped onto and above the V-door of the derrick, with the cylinder body being fastened to at least two other points —usually at the girts—above the base mounting. One end of line is securely fastened to the back side of the cylinder, passed over a pulley built into the top of the piston rod and thence down through the derrick to the floor or pipe walk where it may be tied to a joint of casing or drill pipe. A small rope guide and roller installed on the front or derrick floor side near the top of the cylinder, eliminates the possibility of the piston rod being bent when in the extended position, should excessive stresses, other than vertical, be placed on the hoist.

Water under pressure is applied to the bottom side of the piston end, expelling it upward through





Hoist is clamped to the derrick girts above the V-door. The piston, shown in the extended position, will extend to 16 feet, providing maximum effective lift of 32 feet. Note wire line guide on upper part of cylinder, and flexible water line near base.



Movement of hoist is controlled by operation of a small three-way, two-port, plug-type valve. Water pressure from a sub-floor connection passes up through right leg of stand and on up to cylinder. A short length of soft rope is tied to end of hoist line to facilitate pipe handling.

the cylinder. The actual lifting effect is multiplied to twice the distance traversed by the piston rod, since the one end of the line is permanently fixed to the body of the cylinder, and the piston acts on the loop that runs up over the sheave mounted atop the moving piston rod. The 16-foot stroke of the piston rod therefore creates an actual maximum lift of 32 feet. The piston is of heavy construction so that it will fall of its own weight when the water pressure is released, thus simplifying operation of the hoist.

The movement of the hoist is controlled by the manual operation of a small 3-way, 2-port, plug-type valve. Horizontal position of the handle admits water to the hoist, causing it to lift; the 45-degree position holds the hoist and its load wherever desired; and the straight-up position exhausts the water, permitting the piston rod to fall back into the cylinder of its own weight.

Rugged, Simple Construction

Constructional details of the hoist mechanism are comparatively simple, but very rugged, and little attention is necessary to keep it in good operating condition. In nearly two years of service, the several units built experimentally and placed in regular service have not required any repairs other than replacement of piston rubbers, cat line, lubrication, etc. Since there are no packing glands, no leakage trouble is encountered from that usual source.

The body of the cylinder is a 16½-foot section of 4-inch externally upset 12.75-pound API oil well tubing, the inside being ground and honed to a smooth finish. The piston rod is a section of 3½-inch 15.50-pound seamless steel drill pipe. The piston body is a 13-inch piece of 4-inch solid stock. The upper half is machined to a drive fit inside the end of the 3½-inch piston rod, and the lower half is machined and sleeved with a 5½-inch long bronze bushing machined to a tight drive fit, giving an over-all diameter of 3-31/32 inches to the effective portion of the piston. The shank of the piston is welded to the piston rod after it has been pressed into place.

The lower end of the piston is fitted with a half section of a 4-inch lip type piston rubber. The hub on which the piston rubber is mounted is made to extend down approximately ½-inch below the lip of the rubber so that the rubber will not be injured when the piston falls to the bottom of the cylinder. The extended hub strikes the cylinder bottom before the rubber can contact it.

Water enters the bottom of the cylinder through a specially designed damage-proof connection. Instead of having an ordinary fitting project out from the side of the cylinder where it might easily be broken off due to careless moving or handling of the assembly, a 1-inch steel ell is welded to the inside of a 7-inch section of the same 4-inch tubing material, and the latter in turn welded to the bottom of the cylinder. The upper end of the ell opens into the main cylinder through a 1-inch hole bored through a 1-inch steel plate forming the bottom of the cylinder. The lower, or exterior end of the ell is placed flush with the outside of the short section of tubing, making it possible to connect the water line into the cylinder with a short nipple or street ell. So that the hub on the bottom of the piston body will not fall into this 1-inch opening on the down stroke, the opening in the steel plate is placed approximately 1-inch off center. Built into a 4-inch collar screwed to the upper end of the cylinder is a steel shoulder or piston stop, and a bronze piston rod guide.

The catline, the one end being anchored permanently to the back side of the cylinder, passes over an 8-inch sheave mounted atop the piston rod, then downward through the rope guide on the front of the cylinder. The sheave holder is a demountable fitting which screws into the top of the piston rod. A pressure lubrication fitting built into the bearing assures continuous smooth operation of the sheave.

Cylinder Mounted in Derrick

The hoist may be mounted in the derrick by any one of several different means. In one district the cylinder was set in a collar or socket that had been welded to the heavy channel beam just above and behind the rope guard in the derrick "V." Another district accomplished the desired result by placing a 4½-foot piece of 3-inch tubing horizontally in front of and just above the V-door rope guard. With the collar or socket welded to the top, this horizontal member was securely welded to the guard and also supported at the ends by braces welded to the spanner plates, by which the guard is bolted to the channel beam and derrick braces. By either method of setting, the collar or socket becomes an integral part of the derrick and is torn down, moved with, and set up by the rig builders.

Various types of derricks require different methods of setting up the assembly.

Depending upon the type of derrick, little or no auxiliary bracing is required for the ordinary lifting purposes for which the hoist was intended. The full vertical stress exerted by the hydraulic catline under the load is taken principally by the derrick "V." Other adjacent braces however take up part of the stress, but it is not great enough to warrant additional reinforcing. The small component of horizontal stress that is sometimes imposed when the hoist is used to drag or lift some object from the derrick floor to the doorway, is not great, but to distribute such stresses, some additional bracing was added to the second girt above the "V" to strengthen it and help distribute such loads as might be applied. The design of some derricks is such that additional bracing is unnecessary.

3000-Pound Maximum Lift

The maximum possible lift of the hoist is calculated to be about 3000 pounds, the lift being in a direction parallel to the body of the hoist. The greatest maximum horizontal loading on the side of the derrick is calculated to be around 1020 pounds.

The unit was designed to operate under pressures in the neighborhood of 300 to 350 pounds per square inch, this being the pressure generally held on the cold water line coming from the boiler-feed water pumps. Drilling rigs on which this hoist is used ordinarily employ feed water pumps of 7 x 4½ x 10 size, operating under 300 pounds steam pressure.

Some crews can and frequently do, boost the pressures considerably beyond this point to perform certain operations, especially during rigging up and tearing down. On the casing operations, experienced crews nearly always raise the line pressure to obtain more speed.

The control valve stand consists of two vertical 1½-inch pipes welded to a ½-inch steel base plate. Set about 10 inches apart, the pipes are joined together at the top with a 3-way, 2-port plug-type 1-inch valve. The right leg of the valve is the inlet connection, and the left is the vent line. Holes bored through the derrick floor permit under-floor connections. From the top port in the control valve the water is conducted to the cylinder in the derrick through a 1-inch wire-wrapped flexible hose. Several spikes hold the base plate to the floor.

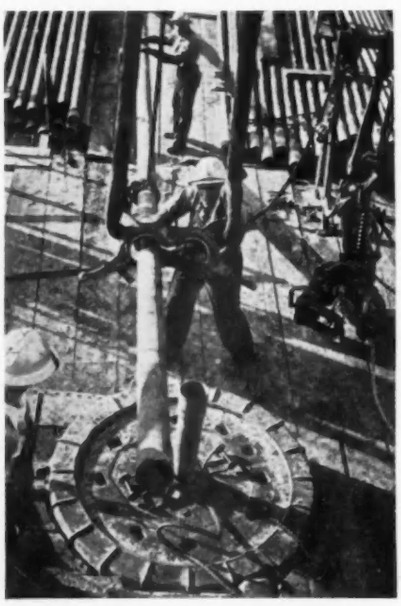
Safer, Faster Operating Permitted

Design of this hoist unit was prompted originally by the number of accidents that had been occurring through the use of the cathead in operations around the derrick floor other than actually spinning up. A number of hazards have been effectively eliminated since the units have been put into service.

Since the catline is completely inactive during casing operations the hoist operator is in a much more effective position than a cathead operator for he can see the material being lifted at all times, and manipulating the control valve is much more rapid and positive than operating a catline.

Fatigue of the driller and cathead operator is substantially reduced. Its use greatly reduces the amount of clutching and declutching that ordinarily is necessary during the running of a string of casing. The cathead operator's work is materially lessened because the major part of his job—lifting and handling the heavy catline—is eliminated, except for the spinning-in phase of the work.

The hoist permits an actual increase in the speed of picking up drill pipe and running casing, as the hoist operator pulls a joint into the V-door, while the cathead man is spinning up and tonging in the joint already in the derrick. Consequently a joint is always ready to be picked up and pulled into the derrick. In handling drill pipe with certain types of elevators, it is possible, by proper coordination, to lift the joint up into the open elevators, thus causing them to latch automatically, entirely without manual assistance.



Running casing is speeded up since a joint may be brought up into the derrick while the previous one is being spun up with the catline. By proper manipulation of the hoist, the joint may be brought and latched in the elevators without having to operate the drawworks.

Catline wear is reduced considerably, both through decrease in actual use of that line, and through minimizing the kinking of catlines due to the inability of the cathead man to see kinks from the pipe rack walk. Records kept over a period of 18 months show that the working life of catlines has been extended to between 200 to 250 percent. The rope originally intended for use on this hoist is a 1⅛-inch three-strand, soft-laid line. Because such line is flexible, easy to tie, does not wicker, and generally handles better, it is preferred over wire line. Since the occurence of the existing shortage in rope materials, however, a combination line using wire rope with a length of soft-rope on the free end, has been used with equally good results.

The handling of miscellaneous equipment both above and below the derrick floor is greatly facilitated. Since the drawworks is inactive and noise is at a minimum, verbal communication in an ordinary tone of voice is possible, thereby eliminating the necessity for signallers, and since a steam throttle operator is not needed, it leaves one and perhaps two extra men on the derrick floor to do the job at hand.

Other desirable features, largely pertaining to the design and construction of the hydraulic unit include: (1) elimination of freezing difficulties since the cylinder is self-draining; (2) retraction of the piston is automatic, eliminating the need of external aid; (3) packing glands are completely eliminated; (4) the hoist unit is integral with the derrick, making unnecessary extensive alterations when the derrick is skidded, and a minimum of dismantling if the derrick is torn down; (5) convenience and size of the control unit is such that it may be placed at any suitable out-of-the-way point on the derrick floor, although it is advisable to place it as near as possible to the V-door, and (6) with the exception of the wire line and rope, all forces are under compression.

SEAMEN have risked their lives in an effort to deliver oil to the East Coast. Some of these men are lost as a result of enemy submarine action, while others whose ships are torpedoed go back to home ports, ready and anxious to get on another tanker. The writer interviewed several returned seamen to get information about the determination of these men to give their "all" for their country.

☆ ☆ ☆ ☆

Hole in side of tanker hit by a torpedo. This ship made port in Canada despite this gaping wound. (International News Photo).

Tanker Crews Brave U-Boat Menace to Deliver Oil

By RIVERS REAVES, Staff Writer

EFFORTS of seamen to move gasoline and oil from the Gulf Coast to the Atlantic Seaboard under wartime conditions have resulted in many heroic stories of the seas, not excelled even by the epics of Joseph Conrad in his years before the mast.

In normal times 95 percent of oil, in all forms, that moved from the Gulf to the Seaboard went by tankers. With the outbreak of war, Nazi submarines have been raiding the normal Gulf - East Coast trade routes, sinking all types of vessels, and taking a large toll of tankers.

Slipping out from loading ports under cover of night, and steaming into the jaws of possible death and destruction has been the lot of seamen who operate valuable tankers. The Navy Department has clamped a lid on information that would aid the enemy, but stories of narrow escapes from torpedoed vessels in the Gulf and Atlantic trickle back from those who managed to escape.

Scores of men have lost their lives in an attempt to move the

A cargo vessel picked up survivors shown in two pictures above, 11 days after their craft was torpedoed in the Atlantic. Top is lifeboat approaching the rescue ship, and lower they are climbing a rope ladder to rescue.

gasoline and oil, while at the same time hundreds have escaped. Of those who have been "beached" at various ports, all indicate their anxiousness to get back on another tanker and contribute their part to the war.

Torpedoes and flaming ships do not seem to increase their fears, although many of them have seen their friends and buddies killed or drowned. One sailor said he did not fear the enemy U-boats but was afraid that he might be out of work for a long time.

Here is the story of an Indiana-born, Detroit-reared Irish seaman from Tanker X when it was torpedoed approximately 73 miles west of Dry Tortugas in the Gulf of Mexico. It is a typical example of the coolness and determination of the men to get their ships through to the East Coast.

New Sagas of the Sea

"We loaded lubricating oil and East Texas crude—about 75,000 barrels in all—and were preparing to put to sea when we were ordered to hold up for a time. We dropped anchor and remained in the roads for 16 days. Then the word came to proceed.

A few hours out we joined another tanker loaded with leaded gasoline, both moving eastward in the Gulf. The ships traveled about five or six miles apart, well out of danger of each other.

"The sun had set, darkness was hovering over the waters, and we

At right shows survivors of a sinking joyously greeting arrival of a Coast Guard surf boat coming to rescue them.

—International News Photos.

felt comparatively safe. Suddenly, there was a terrific explosion and a brilliant flash from Tanker Y, carrying the leaded fuel, in front of us. Three torpedoes crashed into the ship's side, ripping it in two and spraying burning gasoline for at least a mile in a circle."

"What did your ship do then?"

"The captain, quickly sizing up the situation, ordered me (I was at the wheel) to wheel and 'run for it.' That was about 8 p.m., and we hoped to make the get-away before the moon came up about 10:30. We gave the ship all she had—straining every point to lose the submarine before she could strike at us.

"It would have been foolish to have attempted a rescue of any men on Tanker Y. We could not see how any person could have escaped from such an inferno. There were 34 men aboard, and 30 were drowned or burned to death. I yet don't understand how four escaped, although it developed later that two were badly burned. One of the survivors told me that the submarine machine-gunned the tanker, but that the four lucky men —wearing life preservers — played dead in the water and floated away unmolested. They were picked up the next morning by the Coast Guard."

"But what about your ship, Tanker X?"

"We ran as hard as we could hoping to escape. It was 9:28; the third mate was standing on the bridge; he heard a torpedo a few yards away, not enough time to twist and get out of the way.

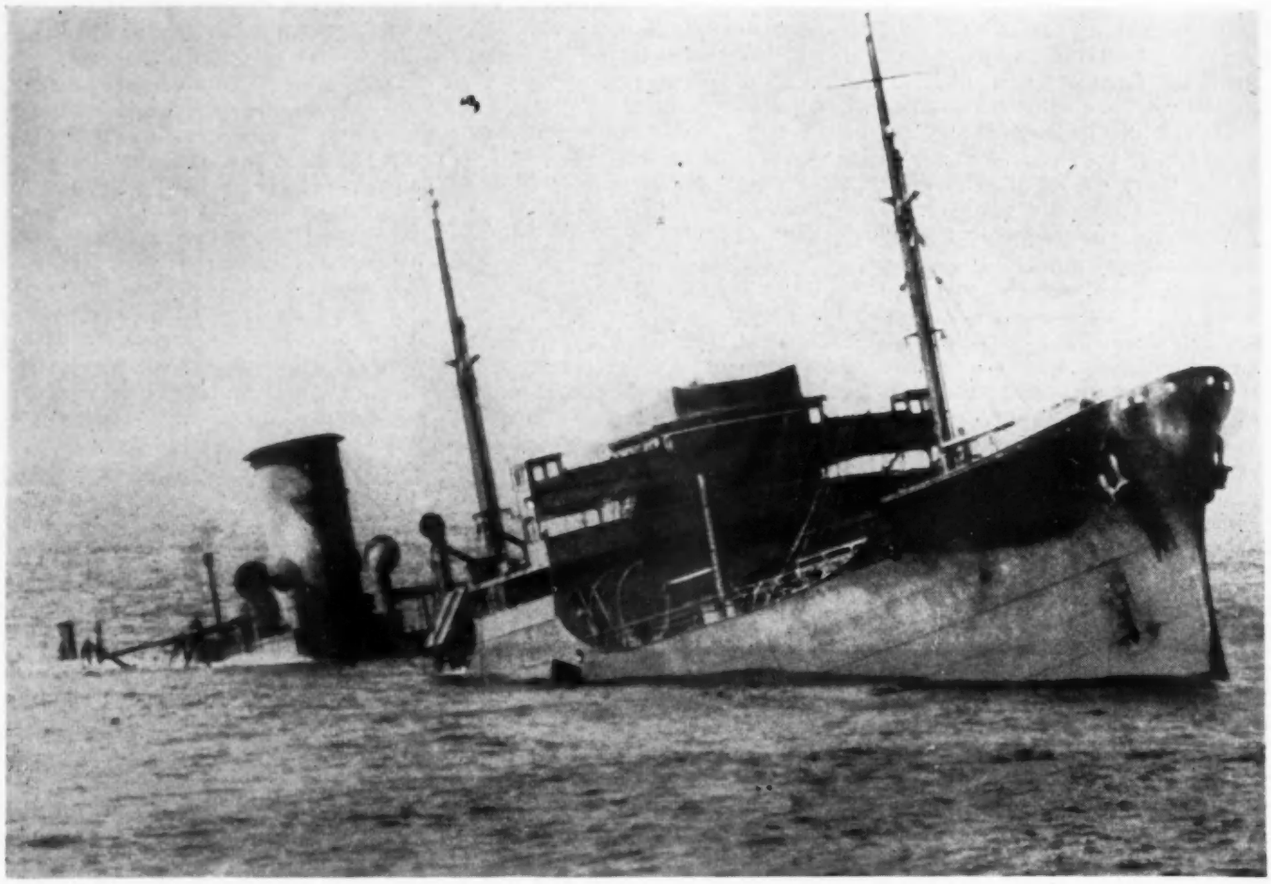
"It hit mid-ship just below waterline. The terrific explosion knocked my compass out of place; I felt like someone had given me a hard blow on the nose. Flames leaped high in the air, enveloping the ship fore and aft. The captain, standing by, ordered me to bring her hard to the right, if possible, since prevailing winds would blow the fire away from the vessel."

"In about a minute the flames died down and then began to burn steadily. We tried to launch a lifeboat, but it was too hot. Desperately, we tried a life raft, but the launching mechanism jammed and we gave that up. There were some empty oil drums on deck, and we threw them overboard and planned to jump overboard and cling to them as a last hope against death.

"We loosened one of the creaky life rafts, only to tear it in two on the jagged ship's steel which had been ripped out by the torpedo.

"In a last effort we finally got a lifeboat on the water, and nine men climbed aboard. The chief pumpman already had jumped overboard with a dislocated shoulder. He had on a cork life belt, and swam three miles to a partly burned lifeboat which had become loose and had fallen into the water. There were 37 men on the tanker, and only 10

These survivors of an Axis attack in the Atlantic show how they lolled around in the lifeboat for three days before rescue. A sail was rigged and the boat was steered by the stars at night. (International News Photo).



This American tanker was sunk off the Georgia coast early in April. After being torpedoed, this tanker was shelled, as shown by shell holes in the bow. Another tanker was sunk within a mile of this one. Of 75 seamen on the two boats, 54 were saved and 21 reported dead or missing. (International News Photo).

of us escaped. There is no question now about my lucky Irish star."

Dangers at sea are not devoid of humor, the seaman said.

"While we were scrambling to get into the lifeboat, the captain yelled to wait a moment until he raked $9000 on the ship into a duffel bag. That was one time a lower grade officer defied his superior and told him, 'to hell with the money, let's get away.'

"We shoved off just in time, as the fire was getting closer. We probably would have been machine-gunned, but Tanker Y had sent out an SOS when it was hit, and the Germans didn't have time to murder us since they knew other craft would come to the rescue immediately. We were picked up early the following morning by the Coast Guard."

Thermite Torpedo Used

All the sailors on Tanker X frankly believe that the submarine crew knew the ship was loaded with lubricating and crude oils since a thermite torpedo was used while ordinary torpedoes were fired at the tanker containing the Ethyl gasoline.

"The enemy used only one torpedo on us; they probably would have used another, but the thermite torpedo was so effective in setting the ship on fire they probably thought it was unnecessary," he seaman said. "You would never be able to convince me they did not know what we were carrying."

Sailors tell other daring tales of the sea—all in the effort to transport oil and gasoline to the East. All the men regard the German U-boat crews as murderers—striking first wtih the torpedo and then strafing the lifeboats, tossing about on the waves, with machine guns.

Here is one instance of Nazi ruthlessness as told by an escaped sailor.

"We had discharged our gasoline at an East Coast. port, and were running 'light' back to Cuba to pick up a cargo of molasses when one of our crew spotted a periscope feather rippling through the water. We prepared for the blast, but it didn't come.

"In a few minutes the submarine surfaced, the men climbed on deck, smoking, laughing and talking—apparently happy to be able to escape from cooped quarters for a while.

"The sub's deck guns went into action. We then realized they were going to shell us. A shell tore through the galley, killing the chief steward, and blowing one of the cook's arms off.

"Meanwhile, a few of us swung a lifeboat over the side and were preparing to get away. The cook crawled on deck, but before he could fall over the deck rail in his weakened condition, another shell tore his head off. A large shell finally sank the small tanker."

Protective Efforts

As the enemy stepped up the tempo of raids against tankers and merchantmen, the United States Army and Navy have taken defensive as well as offensive measures to destroy these raiders. Naturally, details of the campaign against submarines are military secrets. But destroyers, subchasers, patrol boats, airplanes and blimps are being used to drive the U-boat from shipping lanes. In addition, night shore lighting has been blotted out to protect ships against

This Simple Idea . . .
is SAVING BELTS
for *Industry*. . . and Rubber for the *Nation*

To see for yourself the belt-saving importance of the CONCAVE SIDE, just pick up *any* V-belt and bend it as it bends when it goes around a pulley.

As the belt bends, grip its sidewalls firmly with your fingers as in the photograph above. You will feel the sides of the belt *change shape*. If the sides were straight before bending, they will *bulge outward* as the belt bends. (See Figure 1 on the right).

Now look at Figure 2. Here you see how bending changes the shape of a belt that is built with the patented Concave Side. The side becomes perfectly *straight*. This belt, when bent, precisely fits its sheave groove. Here are the savings:—(1) There is no side-bulge. This means *uniform* wear—*longer* life—a saving in belts for you, a saving in rubber for the Nation. (2) The full side-width of the belt uniformly *grips* the sheave groove wall—carries heavier loads without slippage—another saving of belts and a saving in power, too!

Only belts built by Gates are built with the Concave Side, a Gates patent.

What Happens When a V-Belt Bends

FIG. 1

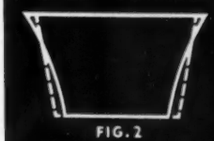


FIG. 2

THE GATES RUBBER COMPANY

Engineering Offices and Stocks in All Large Industrial Centers

GATES VULCO ROPE DRIVES

Chicago, Ill. 549 West Washington
New York City 215-219 Fourth Avenue
Birmingham, Ala. 405 Liberty National Life Bldg.
Los Angeles, Cal. 2240 East Washington Blvd.
Denver, Colo. 999 South Broadway
Dallas, Tex. 2213 Grillin Street
Portland, Ore. 333 N. W. 5th Avenue
San Francisco, Cal. 2700 16th Street

risks of silhouetting. This measure was recently ordered extended from the Atlantic Seaboard to include the Gulf of Mexico shores. The regulations apply to all lights for a distance of 10 miles inland and to all city lighting in communities of 5000 or more people within a distance of 25 miles of the coast. Street lights must be shaded from above and, if visible from the sea, blacked out on the seaward side with wattage reduced to minimum consistent with public safety, and are to be prevented from shining on reflecting surfaces. Show windows, store fronts, filling stations and signs are permitted if more than 500 yards from the coast and reduced to an absolute minimum. Motor vehicles are not permitted on beaches at night and bright headlights prohibited on highways or streets within 500 yards of the coast.

Planes have proved effective anti-submarine weapons, largely because of the great distances they can patrol. They have been of great help in rescuing torpedoed sailors. One of the main objects of airplane patrols is to keep the submarine below the surface. Submarines have been successfully detected even at night.

Life on these plane patrols has its lighter side. Splashing porpoise and dolphins create misleading eye visions. An English patrol plane bombed a sperm whale, mistaking it for a submerged German U-boat. The result was an oil slick, typical of a sunken submarine.

Blimps have proved effective in many cases, especially in remaining directly over some vessel loaded with a particularly valuable cargo. These lighter-than-air craft also have made rescues at sea.

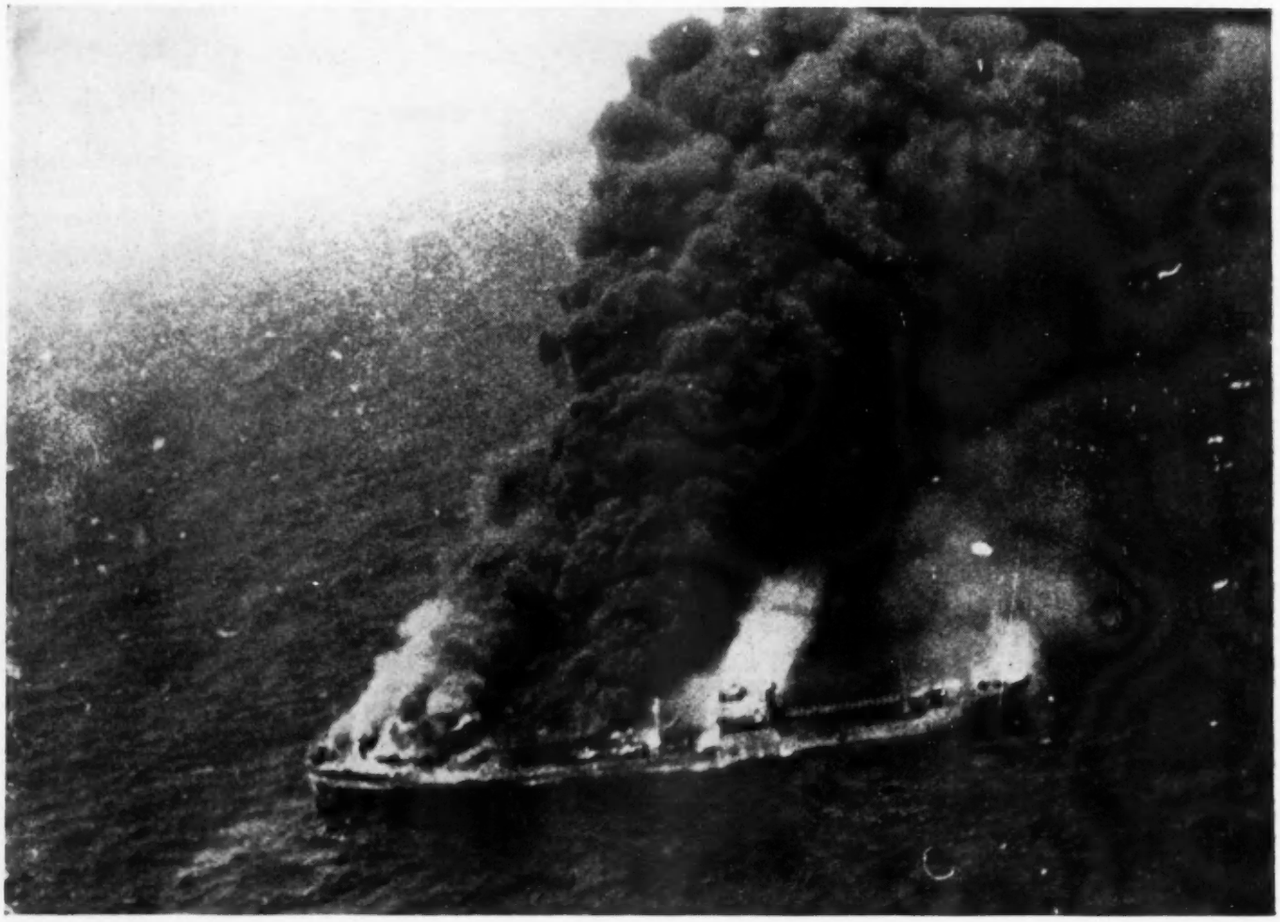
Enemy submarines sunk off the coasts of South America and Australia are publicly announced, while such reports of sinkings in the Gulf and Atlantic are generally held secret. Grapevine reports from men off sunken enemy submarines indicate that when the war is over the hazards of this type of warfare will be sufficient to discourage Germans and Italians from conducting U-boat campaigns in the future.

Will History Repeat?

The United States must drive the U-boat vultures from its sea lanes before the war can be won. In World War I, when the American Navy got the upper hand in the spring of 1917, the tide began to turn in favor of the Allies on land battles because new troops and supplies reached the battlefront in increasing numbers.

Although German commanders have shown brazen boldness in operating in American territorial waters, they also show a deadly fear of any type of protective craft. Slight damage to a submarine in water around England might not prevent it from limping home, but would be fatal near the United States because of the distance from any friendly base.

Although subs are bigger, faster and stronger than those of the previous war, Navy men express confidence the United States is making progress against their attacks and predict the United States can repeat its 1917 success in driving the undersea raiders to shelter.



A column of smoke and flame rises from this tanker torpedoed by an enemy U-boat off Curacao in the Dutch West Indies. This photograph was made from the avenging bombing plane which rushed to the scene to search for the enemy submarine.
(International News Photo).

OIL WEEKLY EDITION

BAASH ROSS News

BAASH-ROSS TOOL COMPANY • LOS ANGELES • HOUSTON • NEW YORK

A MONTHLY BULLETIN COVERING NEWS OF EQUIPMENT AND OPERATIONS IN THE PETROLEUM INDUSTRY

WHAT *One* KELLY IS TODAY'S BEST BUY?

A Frank Answer To The Vital Question—"What Is The Wisest Way To Spend My Kelly Dollar?"

ONE THING this war has done . . . it has made people increasingly aware of the importance of performance and long life in the goods they buy. Today, the man fortunate enough to hold a tire priority certificate isn't wasting it on second grade "price-built" tires. Instead, he's going out of his way—limiting himself in other things, if necessary—to purchase the best constructed, longest-lasting tire he can possibly lay his hands on. He knows that tire may be the last one he'll buy "for the duration" and *performance*, not price, is the only yardstick in which he is interested.

And the same is true in the oil industry. War restrictions on equipment purchases have brought home to oil men the really marked advantages of HEX kellys over conventional types, with the result that more and more operators, faced with purchasing equipment to last for the duration, are turning to hex kellys as the only logical purchase.

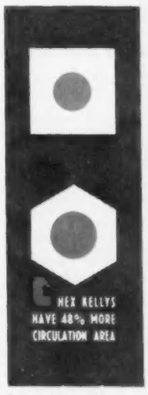
Check the advantages you get in a hex kelly point by point, and you'll see why these kellys are playing such an important part in today's equipment programs . . .

▶HEX KELLYS OPERATE SMOOTHER—LENGTHEN EQUIPMENT LIFE! In modern high-speed drilling, balance is an important factor in a kelly. Because hex kellys are *machined* to shape from solid alloy steel stock, they are held to much closer tolerances than possible in the *forged* construction of square kellys. Coupled with their true concentric bore and accurate joint alignment, the result is almost perfect weight distribution . . . and a smoother-running, better balanced kelly at *all* drilling speeds. Smoother running means less vibrational strains on other rig equipment and longer over-all life!

▶HEX KELLYS STAY STRAIGHT LONGER—REQUIRE LESS MAINTENANCE! One of the biggest factors in kelly "mortality" is loss of straightness. Generally, kellys become bent while being swung back in the rat hole . . . or through improper support while being hauled or racked. In either case, *hex kellys are 23.2%* more resistant to these bending stresses than the comparable size of square kelly . . . and stay straight longer under more severe operating conditions.*

Once you have tried Hex Kellys, you'll find, as others have, that the longer kelly life, the lower maintenance costs, the greater rigidity provided by this one feature *alone* are sufficient to justify a complete switch to hex kellys for all your drilling requirements.

▶HEX KELLYS REDUCE STRAIN ON PUMPS! Hex kellys have 48%* more circulation area than comparable size square kellys. That means your pumps can put a *higher* volume of fluid through your string at *lower* working pressures. You not only get *better* circulation, but longer pump life, less pump maintenance as well!



▶HEX KELLYS ARE STRONGER IN TORSION! Since the stress of rotating the entire drill string is concentrated in the kelly, its ability to transmit torque without failure is tremendously important. Because of its shape and greater cross-sectional area, *the hexagonal kelly is 28.6%* stronger in torque than the comparable size square kelly—an important advantage!*

▶HEX KELLYS ARE STRONGER IN TENSION! Besides *rotating* the string, the kelly must also support it . . . and here again the hex kelly has an edge, being 1.8%* *stronger in tension than the comparable size square kelly.*

▶HEX KELLYS CAN BE USED FOR *EVERY* DRILLING REQUIREMENT! When you buy a hex kelly, you're ready for anything. For this is the ONLY kelly that is equally efficient on pressure jobs as well as straight drilling jobs. If it's a hex, ONE kelly is all you need to meet *any* drilling requirement!

Look at the hex kelly from the standpoint of superior performance . . . from the angle of reduction of wear and tear on your other rig equipment . . . from the angle of maximum adaptability to meet ANY situation. In every case, the answer is the same—buy *hex!*

Your nearest Baash-Ross representative will be glad to show you how little it costs, how much it pays, to use Baash-Ross Hexagonal Kellys. Call him . . . or write direct for further information!

*These figures are based on the widely-used 6" square kelly with the 3½" bore vs. the 6⅝" hexagonal kelly with 4½" bore. Because it is the maximum dimension that governs the selection of a kelly size, the 6⅝" hexagonal (across-corner dimension 7¾") is comparable to—in fact, is actually ⅛" *smaller* in its limiting dimension than the 6" square kelly (across-corner dimension 7⅞"). *In other comparable sizes, hex kellys offer proportionate advantages.*

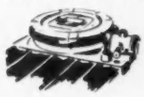
UNDER ALL OPERATING CONDITIONS a Hex kelly is better than a square kelly. But to get the maximum possible efficiency from your hex kelly—and to get longest life and lowest maintenance on your entire rig equipment—drive your hex kelly with a *BAASH-ROSS ROLLER KELLY BUSHING!*

ITS FRICTION-FREE OPERATION permits the smoothest, most accurate and most sensitive kelly feed you can obtain with any bushing . . . at *all* drilling speeds, under *all* conditions. It eliminates jerks, twists and sudden torsional strains in the drilling string, which in turn . . .

1. PROLONGS DRILL PIPE LIFE by reducing twist-off strains and "working" of the joints.

2. GIVES HIGHER BIT EFFICIENCY by maintaining smooth, even bit feed at all times.

3. LENGTHENS ROTARY TABLE LIFE by reducing jerks and damaging impacts on the table bearings.



4. REDUCES SWIVEL WEAR by preventing sudden weight surges against the load-carrying thrust bearing.

5. INCREASES WIRE LINE LIFE by eliminating pounding impacts and tensile surges on the line itself.

LET OUR REPRESENTATIVE give you the full story on this outstanding bushing development. Or write for Bulletin 4 for detailed information!

A NEW EAR GUARD for industrial workers helps prevent fatigue, irritability, and nervous exhaustion due to noisy operations such as found in many phases of the oil industry. It reduces loud noises about 90%, without affecting ability to hear normal sounds and conversation. Increased concentration on work and better efficiency result, according to the report. (No. 510)

BAASH-ROSS

TRUCK TIRE sidewalls are being painted white by one group of oil truckers to increase tire life by preventing careless driving. When rubbed against curbs, etc., the tires tell the story with a "mark" against the driver.

BAASH-POSS

UNUSUAL TEMPERATURE characteristics in a well can frequently aid in locating water, gas, oil, fluid migration and leaks in casing or tubing, according to a report. This "Thermal Logging" is accomplished by means of a special recording thermometer which produces a temperature record on 16 mm. film, later projected for plotting. The method has been used successfully to find points of oil and gas entry, to trace migrating fluid, and discover holes in casing. (No. 511)

Reservoir Pressure Maintained By Regulated Gas Injection

By GORDON B. NICHOLSON, Staff Writer

REGULATED gas injection into the Heep sand, one of several producing formations in the Plymouth oil field, has terminated a previous steady drop in reservoir pressure, kept rate of production decline level, and maintained satisfactory flowing conditions in virtually all wells producing from that horizon. Of a total of 84 Heep sand wells on the large Welder lease, all flow with the exception of two which are on gas lift, these located in a sand lens not directly related to the main body, and accordingly, not completely affected by repressuring. As result of gas injection, the affected formation now has same capacity for producing as it had when discovered.

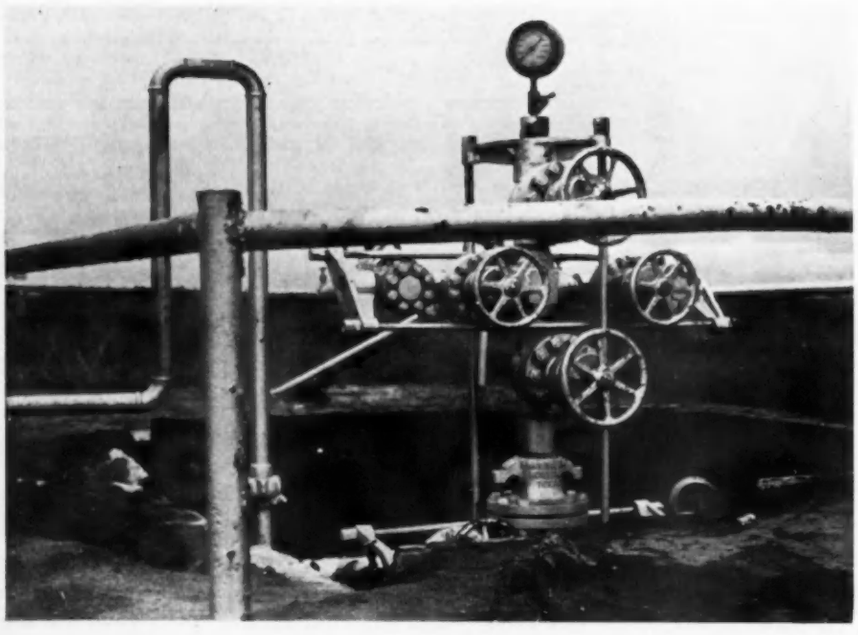
In addition to gas injection into the Heep sand, Plymouth Oil Company is using controlled water injection to maintain pressure in the shallow Plymouth sand. This operation was described in THE OIL WEEKLY of June 22, 1942.

The Plymouth Oil Company produces the bulk of oil yielded by the Plymouth field, which is located in San Patricio County on the lower Texas Gulf Coast, and oil is obtained from several sands found at depths ranging from 5500 to 6150 feet. Physical characteristics of the 5650-foot Heep sand include presence of an overlaying gas cap above the entire producing section, and is thick enough to permit presence of an oil-water contact throughout the field. The sand has a porosity of 34 percent and permeability of 750 millidarcies, and is a member of the Middle Frio Zone, its name, Heep, being the local designation. Reservoir pressures exceeding 2000 pounds per square inch add to interest in repressuring, as hitherto, knowledge of repressuring under pressures this high was scant.

Discovery well of the Heep sand was Welder C-2, completed in June, 1935. By December, 1939, bottom hole pressure had dropped 7%, and at this time injection was started. During the intervening 30 months, pressures in the reservoir have gained an average of 20 pounds, and are being maintained at that amount. Careful calculations are made frequently to determine correct injection pressures to employ, with consideration given to bottom hole pressure trends, volume of fluid recovered, and gas/oil ratios in wells nearest to the key wells. Tests permit establishing of operational program which utilizes to the maximum reservoir energy, taking full advantage of the natural water drive and gas in solution.

By maintenance of constant reservoir pressure, the bulk of dissolved gas has been held in solution, keeping underground oil less viscous, and hence, easier to move through the sand pores, as well as maintaining driving energy within the fluid. By proper rate of flow combined with gas injection, energy has been utilized as a driving and lifting force rather than dissipated in either the reservoir or tubing.

Wells producing from the Heep sand are located on 20-acre spacing, and four injection wells are distributed near the center, or high portion, of the structure. Residue gas is obtained from the plant of Manhattan Gasoline Company located in the field, delivering clean, dry gas for injection after processing to remove fluid contents. Gas is delivered to the main line after third stage compression, without cooling, and at pressure of 2350 pounds. Temperature of line gas



Gas is injected into the casings of key wells through 2-inch pipe. Input wells were left in original condition when repressuring started, gas entering formation through perforations in the casing opposite the oil-bearing section.

Deep in the heart of the active fields

Whenever you need anything in the line of supplies or equipment, from wrenches or safety helmets to pumping units, it pays to get it at the trim, up-to-the-minute Bethlehem Supply store near you.

In the Bethlehem Supply store you'll find a wide range of top-quality products of well-known manufacture. And you'll find a group of field managers, salesmen and engineers with useful oil-country knowledge, ready and eager to give you a hand with your field problems.

Even if you don't happen to need anything at the moment, next time you see a Bethlehem Supply store drop in anyway. The men of Bethlehem Supply will be glad to welcome you. Come in and get acquainted!

CALL **BETHLEHEM SUPPLY COMPANY** FOR SERVICE

BETHLEHEM STEEL

Offices or Stores—*Illinois:* Grayville, Salem, St. Elmo; *Indiana:* New Harmony; *Kansas:* Chase, Great Bend, Russell, Wichita; *Louisiana:* Harvey, Houma, Lake Charles, New Iberia, Shreveport; *New Mexico:* Artesia, Hobbs; *Oklahoma:* Fittstown, Oklahoma City, Seminole, Tulsa, Wewoka; *Texas:* Alice, Borger, Corpus Christi, Dallas, Fort Worth, Freer, Houston, Kemp City, Kilgore, La Ward, Midland, Odessa, Pampa, San Antonio, Seminole, Sundown, Wichita Falls.

at the plant is approximately 180 degrees Fahrenheit.

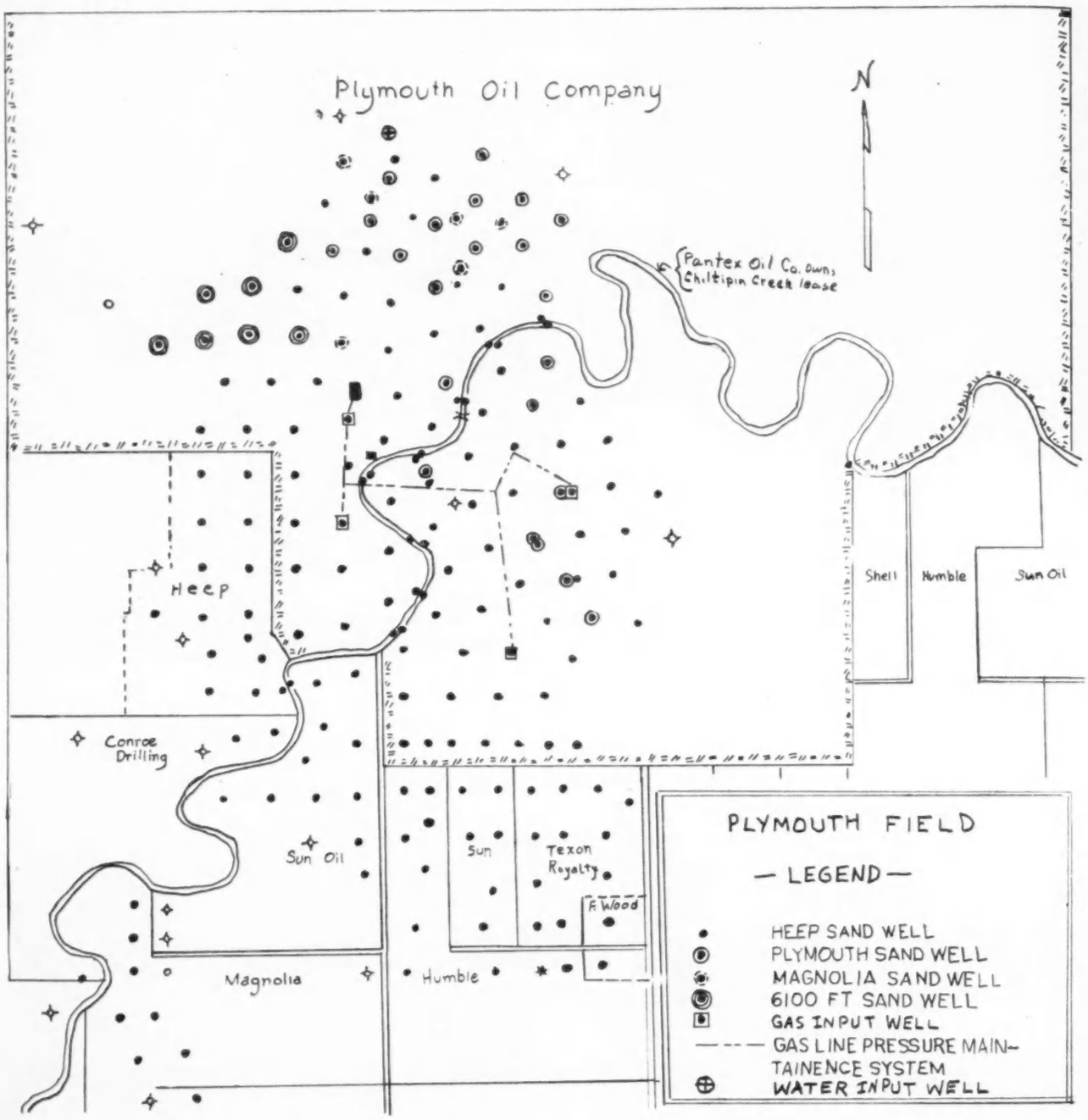
A 3-inch main line receives gas from the plant, while key wells are served by 2-inch lateral lines. Approximately 2300 feet of main line and 9000 feet of laterals serve the system, and include one suspension crossing to reach opposite bank of Chiltipin Creek. With exception of crossing and the few occasions where surface installations are needed, pipe is buried a minimum of 20 inches in the soil for insulation, while all exposed pipe is covered with asbestos wrapping. Lines are all-welded and coated with tar paint for protection against corrosion, and are comprised of random lengths.

At the juncture of the main line with the first lateral, a special scrubber is erected to remove lubricating oil left by compressors, while at frequent intervals loops, expansion joints, and drips are located for removing condensed water and vapors. Plymouth Oil Company injects gas into the two wells nearest the gasoline plant at normal line temperature, but for wells located farthest from source of supply, provide heaters to warm the gas and prevent freezing at regulators.

Injection pressures at key wells vary, depending on volume of gas handled, position on structure, and relation with respect to water level. Pressures range from 2150 to 2350 pounds, and all injection wells are provided with regulators to proper pressure. Present average bottom hole pressure in the Heep sand is 2291 pounds.

Two heaters serving the two

Map of Plymouth field designating different producing zones from which wells produce, and also showing gas injection distribution system and arrangement of key wells. Plymouth sand wells at north edge have pressure maintained by salt water injection.



UNSUNG HERO!

For years he's been making a living out of what you so smugly call "junk." Gathered up what *you threw away* . . . paid *money* for it, even. Recognized the *importance* of it, *located* it, *invested* in it, *hauled* it, *sorted* it, *prepared* it, *stored* it. Thank God he did.

Today the SCRAP collector is almost the No. 1 man on the blitz parade. Pin a medal on *him,* if you want to reward public service!

He just about doubles steel production!

For, every ton of scrap he feeds to the hungry maw of the steel furnace, combined with smelted iron, yields approximately *twice the amount of new, better* steel. For twice as many ships, tanks, guns, planes, shells and other weapons of Victory! Or in peace days, *double* the abundance of automobiles, refrigerators, washing machines, radios and other contributions of industry to the comfort and progress of a free America.

Scrap collectors and dealers, the country over, are cooperating with Salvage for Victory campaigns . . . willingly paying individuals or patriotic organizations for scrap thus obtained. But *every* day . . . in between civilian drives . . . they continue the search for scrap in their own established, systematic way!

You can help them to *get in the scrap!*

Pittsburgh Steel Co.

GRANT BUILDING PITTSBURGH, PA.

Heaters warm gas before injection into wells farthest from source of supply to prevent freezing at regulators. Thermostatically controlled water heater is located in small house, circulating water through large jacket for heating gas line passing through center.

wells farthest from the gasoline plant warm the gas before it reaches regulators; otherwise, freezing of valves in the regulators would become troublesome where flow is restricted by chokes. Design of each heater includes a 40-foot large-capacity pipe jacket, with a closed gravity system, while heating element is an ordinary 30-gallon thermostatically controlled hot water heater. Hot water from heater is circulated to the lower end of jacket, by a small external pipe bound to the jacket and insulated; then it enters the jacket, flowing to return water heater, and enveloping the gas line which is confined centrally inside the jacket. Gas is thus heated by contact with hot water.

Each hot water heater is located in a small house which protects it from the elements, while on the roof sets a drum containing a supply of water which feeds by gravity into the heater as needed to compensate for loss by evaporation.

The special scrubber in the gas line is made of upright large-inch container pipe provided with an internal element upon which moisture collects and drains from the gas stream. Loops in lateral lines protrude above the ground, and stand about six feet high. Due to high pressure of gas, guys equipped with turnbuckles are anchored in the ground on both sides to prevent undue vibration in loops.

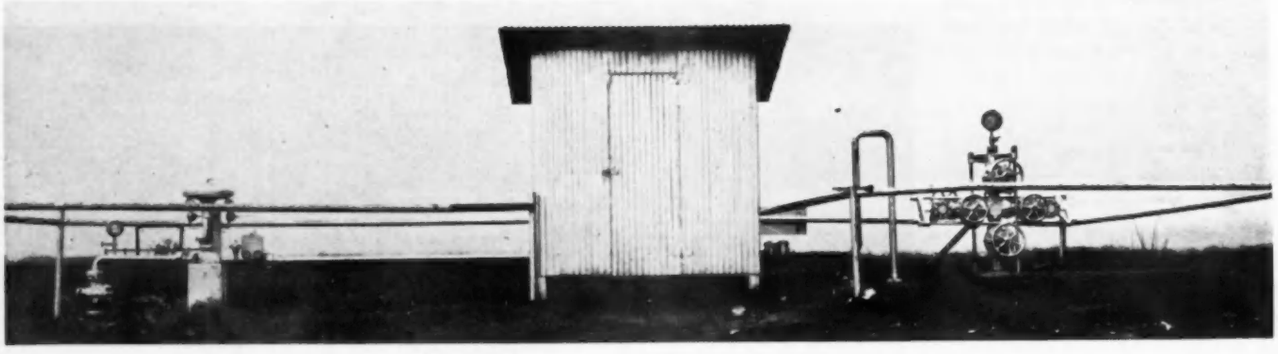
Nearly all wells producing from the Heep sand were completed by cementing the production casing through the formation, then perforating liberally a section including three to five feet of the sand midway between the gas-oil and oil-water contacts of the individual wells. The four wells selected for injection were left unchanged when repressuring started.

Pressure maintenance has restricted encroachment and coning of water which threatened the lives of many wells at the time repressuring was begun, and in many instances, wells which were producing water due to coning have settled down to yielding only a fraction of the former amount. Average gas/oil ratios of wells flowing is 475 to 1, which represents the amount of gas held in solution in the oil. Ratios have not increased during repressuring period.

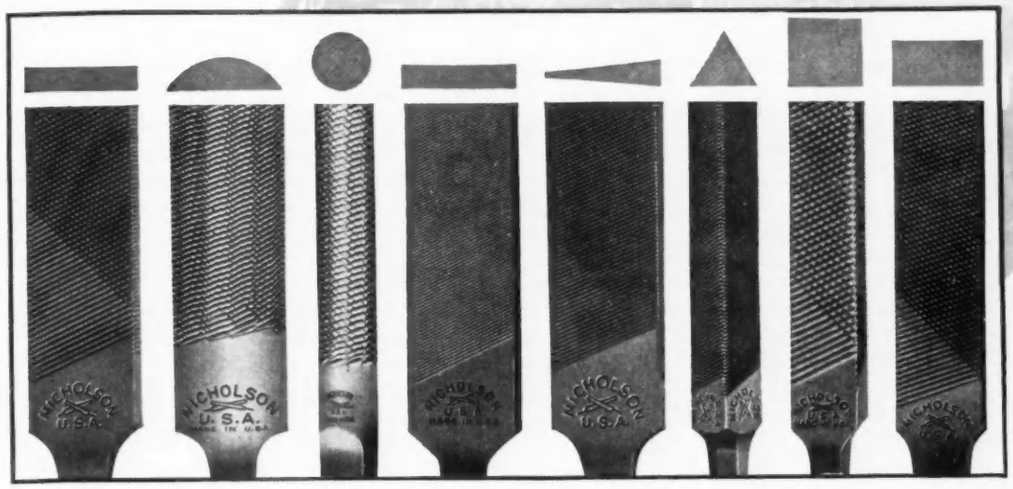
Volume of gas injected in key wells is determined by periodic surveys and by tests made on other wells. Gas/oil ratio tests are made frequently on wells located adjacent to input wells, and any rise in gas volume is recorded for altering input volumes. Gas is carefully injected in amounts calculated to maintain constant bottom hole pressure through the reservoir.

Controlled and scientifically engineered injection into the Heep sand has maintained the existing gas cap in its original state, and holds pressure of the water drive constant. Water influx admitted in proper volume exerts the force necessary for obtaining greatest recovery, and full efficiency of the water drive is being obtained. Company engineers estimate that recovery from this formation will be increased up to 60% over expected recovery without repressuring. Among other benefits from repressuring are: (1) Utilization of maximum natural reservoir energy and gas in solution; (2) Water encroachment from edges has been controlled, and coning in producing wells rectified, with less volume of water produced today than when injection started; (3) Net cost of production is less than if wells were worked over; (4) Additional oil is recoverable now without expenditure of steel and vital war materials.

One of the injection units, showing regulator, meter housing, and key well. Volume of gas injected is carefully metered, and pressures adjusted to the optimum amount for each well.



Illustrations in color by courtesy of Caterpillar Tractor Co. — builders of quality tractors and engines deserving the best in maintenance tools.



LET'S GO! U.S.A. · KEEP 'EM FLYING

PUMPING — drilling — pipe-laying . . . whatever happens, *the work must go on!* And never has this been more imperative than in these hectic days of war. Dependable power—sturdy equipment—quickly available parts — and a well-stocked shop or kit of repair tools . . . these are the safeguards with which every oil-field job must be provided.

There's not another repair, sharpening or tune-up item more frequently needed than FILES. The Nicholson factories are supplying files to your equipment or mill-supply house to the utmost of their ability.

Good files conserve tool steel by giving longer and better service. Nicholson and Black Diamond brands go the limit toward attaining those objectives. *Twelve perfect files in every dozen* is the Nicholson guarantee.

Above are the file "stand-bys" of every well-managed oil-field maintenance department or crew. Left to right:

Flat—tapered (same cuts in Hand or blunt); ***Half Round; Round; Mill*** (single-cut—for smoothing and edged-tool sharpening); ***Knife*** (for narrow slots and sharp angles); ***Three Square; Square; Pillar.***

NICHOLSON FILE CO., PROVIDENCE, R. I., U. S. A.
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The Stand-bys

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NICHOLSON U.S.A. MADE IN U.S.A.

FOR EVERY PURPOSE

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Selection of Internal Combustion Engines

PART 2—Horsepower Performance Curves

By EMORY N. KEMLOR
Associate Professor of Mechanical Engineering, Purdue University

ONCE the general features required in an engine have been determined the engineer is prepared to proceed with the evaluation of the performance of an engine on the basis of these requirements. The performance of an internal combustion engine can take into account the power or fuel performance. This article will be limited to a discussion of the horsepower and torque curves. A later article will discuss fuel performance and some problems connected with the economical selection of fuels.

The internal combustion engine as normally applied to oil field work is in effect a complete power generating plant. It contains its own cooling system, electric generating unit, etc. The power to operate all this auxiliary equipment may be a considerable portion of the engine's output. The user of the equipment must, therefore, take this fact into account in determining the power the engine can deliver at the clutch. With the exception of engines for permanent service, such as for pipelines, most oil field engines are of the variable speed type. This discussion will be primarily concerned with this type of service, although the principles involved can be applied equally well to the variable speed type.

Horsepower performance curves are normally furnished for the bare engine or for the power unit. The curve for the bare engine is as might be inferred, for an engine without any accessories. The power unit is for the engine with all the accessories required for its normal operation. This would include among other things the fan, water pump, generator and, if used, an air filter. Figure 1 shows a typical horsepower curve for a small single cylinder engine with and without accessories. The output of the unit is as much as 10% below that of the bare engine. At the higher speeds, the power required by the accessories increases. The power output of the fan may increase in proportion to the cube of the speed and that of the pump as the speed if the head remains constant. Actually it will increase faster than this.

Because of the wide variation in climatic conditions and elevation, all results are reduced to a common basis. The standard condition set up by the American Petroleum Institute standards 11-c are a temperature of 60° F. and a barometric

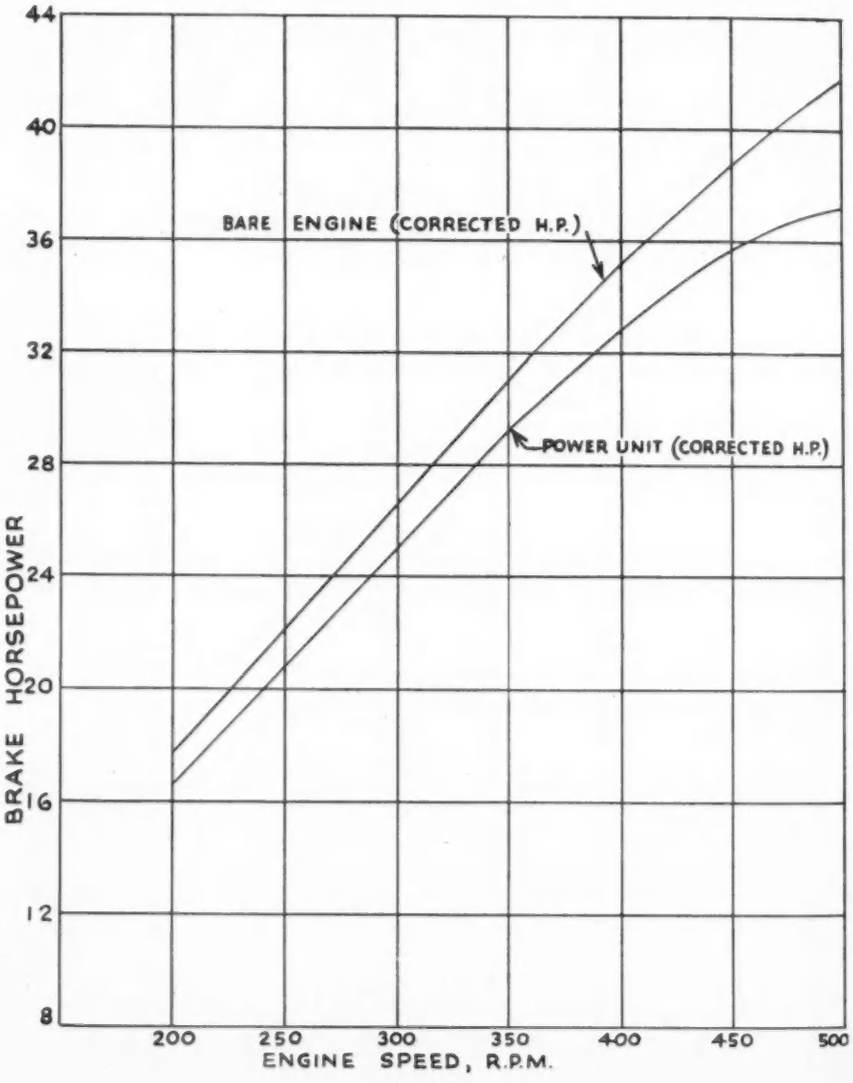

FIGURE 1

DURING THE EMERGENCY

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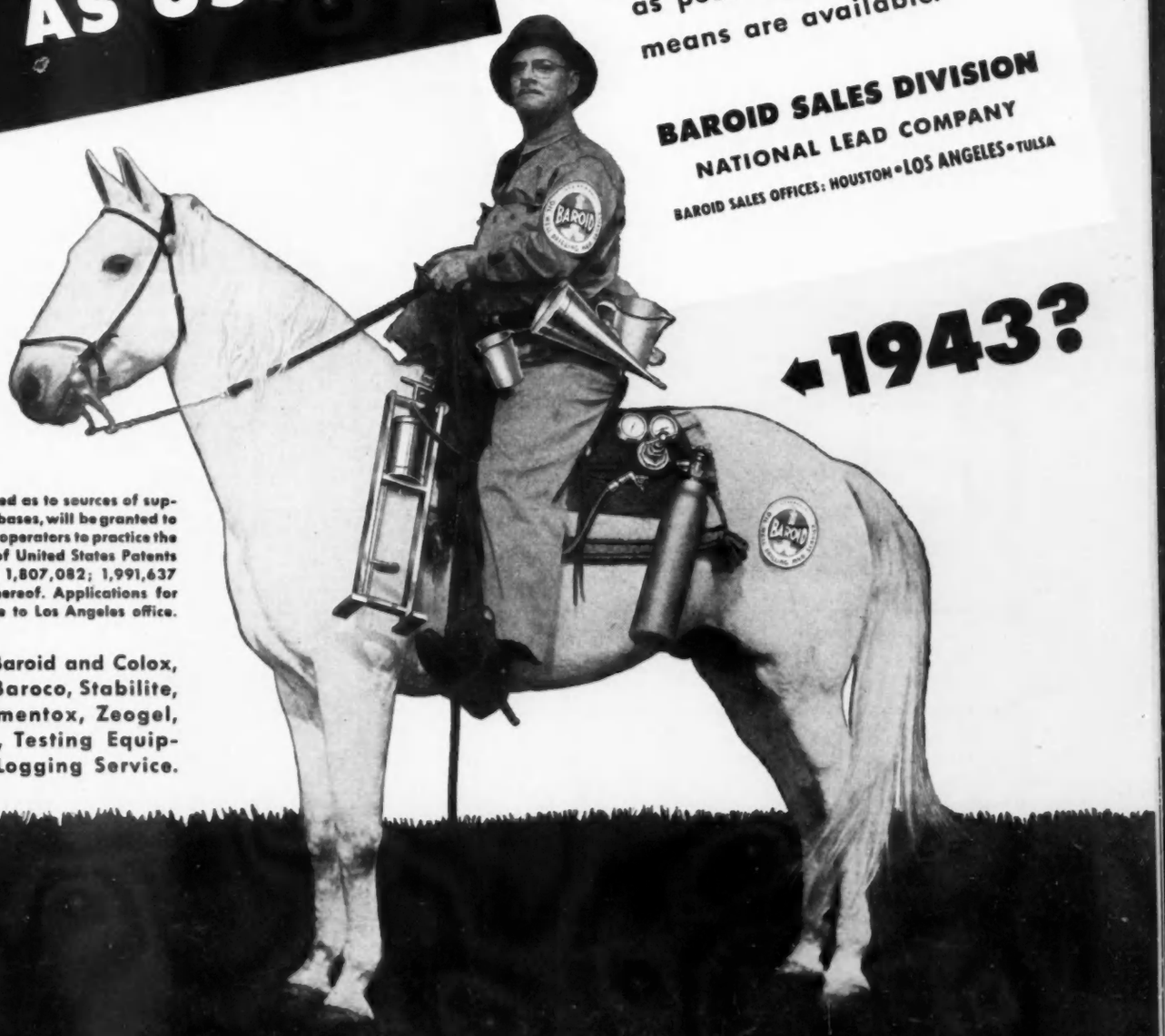

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pressure of 29.92 inches of mercury. The horsepower at any other condition than standard will be given by

$$HP = HP(std)\ \frac{P}{29.92}\ \frac{520}{460 + t}$$

where HP(std) = horsepower at 60° F. and 29.92" Hg.
P = barometric pressure in inches of mercury
t = temperature in F.

These reductions in horsepower are made necessary because the maximum output of an engine is determined in part by the amount of air which the engine can take in. If the weight of air taken in is reduced because of a lower atmospheric pressure, a higher atmospheric pressure or excessive friction in the intake pipe or manifold, the power output will be reduced. If, for example, as engine is to operate on a lease in an engine house in which the room temperature at engine air intake may reach a temperature of 120° F. and the barometric pressure drop to 28 inches of mercury the horsepower would be reduced to

$$HP = HP(std)\frac{28}{29.92}\ \frac{520}{580} = .885\ HP(std)$$

Under these conditions the engine under the best of operating conditions could only deliver 88.5% of the value when operating under rated conditions. Figure 2 shows 5 different rating curves which might be used for the same engine. Curve I shows the power which the bare engine could deliver when operating with air intake at 60° F. and 29.92 inches of Hg. Curve II shows the power which the complete power unit could deliver when operating under the same conditions. Curve III shows the horsepower which the power unit could deliver when operating at 120° F. and 28 inches of mercury. Curves I, II and III are based on performance of a new engine operating in the best of adjustment at the factory. When engine is put into service in the field, it will not deliver full power through its life.

Perhaps the most important reason why an engine will not deliver its full power will be because it is not kept in proper adjustment. Where engines are not cared for by skilled mechanics with proper tools or instruments, the engine cannot be expected to develop as much power as where such adjustments are frequently and properly made. In order to care for this factor, it is necessary to further reduce the horsepower curve. Some reduction is also necessary to care for wear, etc. The amount of reduction will in part depend on the frequency with which equipment will be inspected and overhauled. The amount to be allowed for these factors will depend on experience and on the type of service desired. The American Petroleum Institute in Specification 11-c recommends a value of 65% of the power unit value at standard conditions, for pumping service. This 65% factor takes into account normal barometric and temperature changes.

If the engine service is of a temporary or intermittent nature, it may be desirable to use a larger percentage of the power under standard conditions. If long life is desired and it is necessary to keep repair costs to a minimum, a smaller percentage should be used. Curve IV of Figure 2 shows the recommended horsepower for pumping service. Another basis for rating an engine is to take a certain mean effective pressure and base the horsepower on this. Curve V shows such a rating based on 45 lb/in² brake mean effective pressure. It can be seen, that for the engine tests that this curve gives values comparable with the A.P.I. recommended curve. The use of a constant BMEP (brake mean effective pressure) is not desirable because it penalizes the well designed engine and may overrate the poorly designed engine. A proper choice of the BMEP will give comparable results at low speeds. However, at high speeds the increased pressure loss in intake and through valves together with increased engine friction and power required by accessories will cause the output curve to droop at the higher speeds. The use of a constant BMEP will not correct for these factors. The selection of the rating of an engine should therefore be based on the actual horsepower-speed curve, must take into account temperature and at-

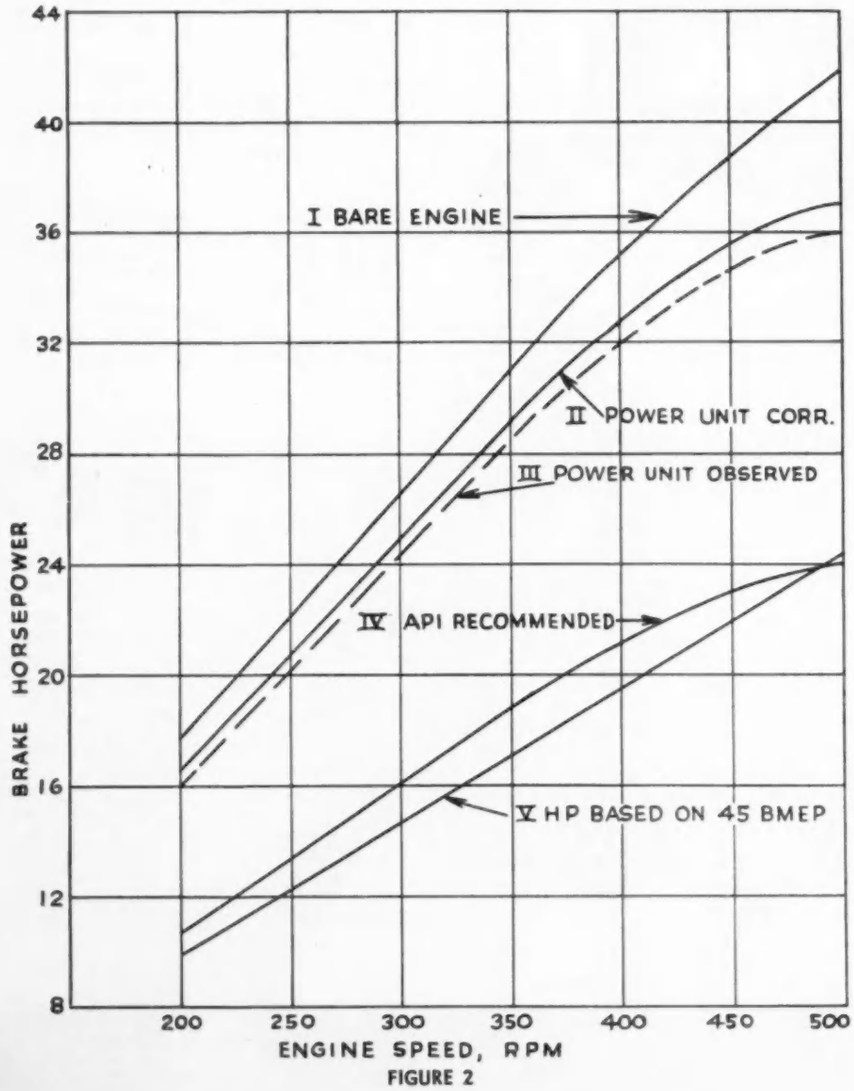

FIGURE 2

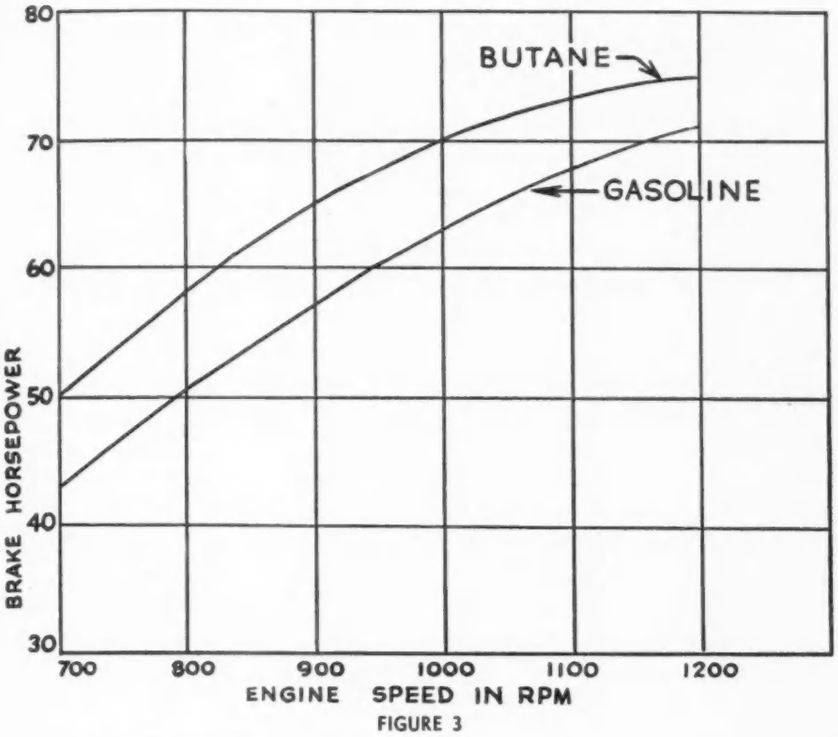

FIGURE 3

mospheric pressure at the air intake and must consider the kind of service expected as well as the economic situation.

One very important factor which is very difficult of evaluation but which has a very marked effect on operating costs is the speed to operate the engine if it is to be used at a constant speed for a major part of the time. The speed range will be determined in part by the design of the engine and accessories. There will be a lower limit below which the engine will not perform properly and there will be an upper limit above which the power output will decrease with speed. Somewhere in this range the operating speed will be selected. If a given power output is demanded, then the higher the speed, within the above limits, the smaller and cheaper the engine may be. Beyond certain limits, however, the operating costs will increase beyond any reasonable limit. For automotive service, high engine speeds are possible because of the relative short time of use. Assuming 80,000 miles as the average life of a car with at least one major overhaul job being required in that time, car service is seen to be very short. At a speed corresponding to 40 miles per hour, 80,000 miles on a power unit would only be 2000 hours or about 90 days or three months service. To have a major overhaul in 45 days and a complete replacement in 90 days would be prohibitive for a permanent power installation. If, however, an engine is slowed down to what would correspond to a 20 or 30 mile per hour speed, the life would probably be increased many fold. A limiting value of engine speed would correspond to a piston speed of 1000 feet per minute. This can be calculated by multiplying the engine speed by twice the piston stroke. For some engines this may be excessive. A 6-inch stroke engine would, for this value of piston speed, have an upper speed limit of 1000 rpm.

Another factor which influences the horsepower output of an engine to a lesser degree is the type of fuel used. Figure 3 shows the equivalent brake horsepower output for an engine when operating on butane and gasoline. Such differences in performance are of course dependent on engine design features and adjustment. As indicated previously, each engine must be tested to determine their performance with different fuels.

The torque curves are often of use where certain minimum values of torque are necessary for starting or accelerating purposes. The torque curves are generally flat. They show a slight increase up to the point where the horsepower curve starts to droop and then show a decrease. The torque for the power unit should be reduced in the same percentage as the horsepower curves to determine the rated torque. The torque should be reduced in the same manner as horsepower to correct for temperature or pressure changes since it is proportional to the horsepower divided by the speed. Figure 4 also shows a plot of brake mean effective pressure against engine speed. For the case shown, the BMEP shows a slight increase up to maximum efficiency and then decreases as the speed is increased. This curve shows why the use of a constant BMEP value is not satisfactory for rating engines when the speed is very high. For low operating speeds, the use of a constant BMEP will be a satisfactory means of rating the engine.

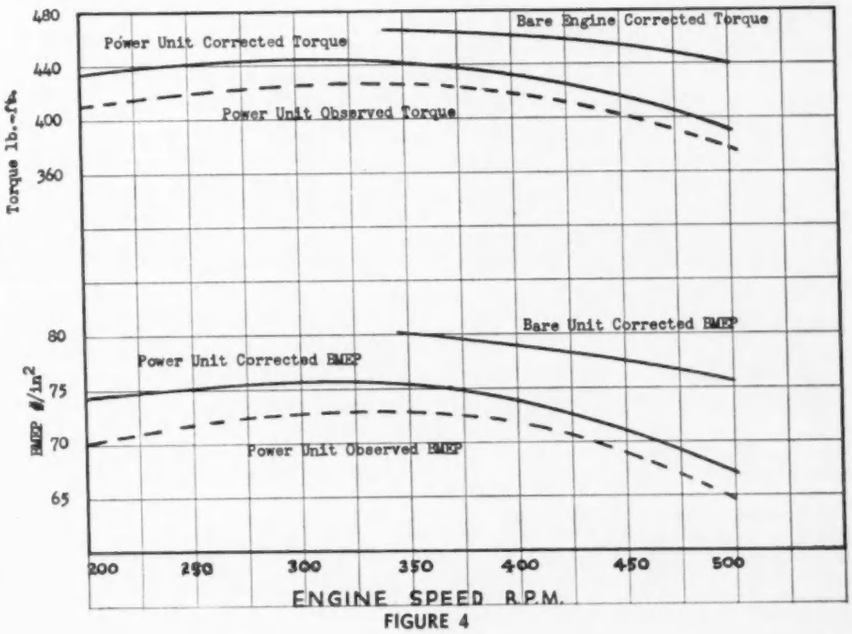

FIGURE 4

Power Take-off from Truck Speeds Field Threading of Large Pipe

By GILBERT M. WILSON
Staff Writer

A SAVING of two thirds in the time usually required for field threading of larger sizes of pipe is regularly being realized by the field construction departments of a large company. Instead of having the men cut such threads by hand, a mechanical method is used that employs a power take-off from the rear axle of the service truck.

Using salvaged automobile parts almost entirely, the drive between the truck take-off and the pipe die consists of two drive shafts, one on either side of an automobile transmission. Four universal joints in the drive shaft system, one at the wheel, one on either side of the transmission and one at the pipe die, make up for inequalities in ground level or misalignment of the apparatus.

The transmission, having a flat cover plate bolted to each end, is mounted on a four-legged angle-iron stand. It provides a high degree of control over the speed of the pipe die, and permits making speed allowances for the variable conditions encountered in both new and used pipe, such as different degrees of hardness or brittleness of the metal, scale condition and size or depth of the threads being cut.

The adapter flange that is connected to the truck rear wheel consists of a welded fitting which slips over the wheel hubs and is bolted to four of the six wheel bolts.

An 18-inch shaft connects the universal joint on this hub fitting to that on the front end of the transmission. A 48-inch shaft delivers power from the rear of the transmission to the pinion shaft of the machine die. The universal joint on the die end is electric-welded to both that end of the shaft as well as to the heavy socket which fits over the square end of the die pinion shaft. The splines are left on at least one end of each shaft so as to permit quick and easy assembling and dismounting of the several units.

Setting up operations usually consist of digging several shallow holes, one in which the jack-supported truck rear wheel can be lowered several inches, and smaller ones in which the four legs of the transmission support may be firmly set.

The end of the pipe to be threaded may be supported on a box or any convenient support, and held firmly in place by two opposed chain tongs braced against the ground. For ordinary jobs, the truck is run in low gear, and the speed of the die rotation controlled from the transmission.

Typical of the time being saved is shown in the cutting of a 4-inch pipe thread. A 4-inch thread that used to require up to 15 minutes time and at least two men, now is cut in only five minutes, and except for the handling of the heavy pipe, seldom requires more than one man to attend the machine. Not only is time saved on the actual cutting process, but some of the men usually required on the cutting jobs now are free to work on other phases of the field job.

With this threading equipment, one man in 5 minutes can cut a 4-inch thread, where it formerly took at least 2 men 15 minutes doing it with hand tools. The truck take-off consists of an automotive transmission and two drive shafts coupled together with universal joints. Any desired speed may be obtained, and the equipment can function equally as well in rough terrain.

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PRACTICAL OPERATING *Hints* FOR

THE practical operating hints for the drilling rig, production man and pipeliner, appearing regularly in these pages, are secured from oil operations everywhere and offer suggestions that will help to improve operating efficiency and safety.

The items give an excellent picture of the remarkable ingenuity being exercised by the operating divisions of the industry. Contributions to these features will be paid for at the rate of $5 for each illustrated item accepted. Address contributions to "The Editor, The Oil Weekly, Houston."

1. WATER SUPPLY

Dual Rig Equalizes Water Pumping Load

TO REDUCE fresh-water lifting costs, one operator installed the twin-well pumping rig shown in the photograph. Two wells were drilled six or eight feet apart, down to the shallow water sand, and a standard-end pumping rig was modified so as to pump both wells simultaneously.

On the calf-wheel-sprocket side of the bandwheel shaft was fitted another crank, similar to the conventionally located one on the outside of the belt hall. The extra crank was keyed on the shaft 180 degrees from the other crank.

An extra walking beam, pitman and samson post then were installed to pump the second well. Aside from a slight amount of additional carpenter work, particularly in the belt hall roof, very little work was required to convert the standard rig into the twin well pumping unit.

For this shallow pumping, little attention was needed for counterbalancing, as one well practically counterbalances the other.

Dual wells to shallow water sand give desired flow without requiring heavy equipment, balanced cranks on unit giving practically full fluid output throughout operating cycle.

2. WASTE DISPOSAL

Portable Incinerator Handles Camp Refuse

Welded box on pipe skids serves as trash collector, built-in gas jet permitting combustion as desired.

DISPOSAL of combustible refuse in the camp of a large West Texas company is greatly facilitated by the system illustrated in the photograph. A large steel reinforced container, mounted on pipe skids and provided with a sucker rod tow-bar, is stationed near the roadway at the back of every company dwelling. A 1-inch pipeline parallel to the back fence of the row of houses is provided with a valve outlet and union connection at each of the containers.

When the container becomes full of refuse, the gas is ignited, resulting in the almost complete combustion of all material. Contrary to the common types of incinerators, this container need not be emptied of ashes, uncombustible material, etc., for long periods. When it does become full, it is a simple matter to hook on a service truck and tow it out to a nearby waste pit.

Since gas is plentiful in this region, this method has resulted in a considerable saving in company camp maintenance expenses.

Mounting the container on skids with the box at the end of the supports eliminates handling, the winch line being used for dumping the unit over away from hitch bar.

THE PRODUCTION MAN

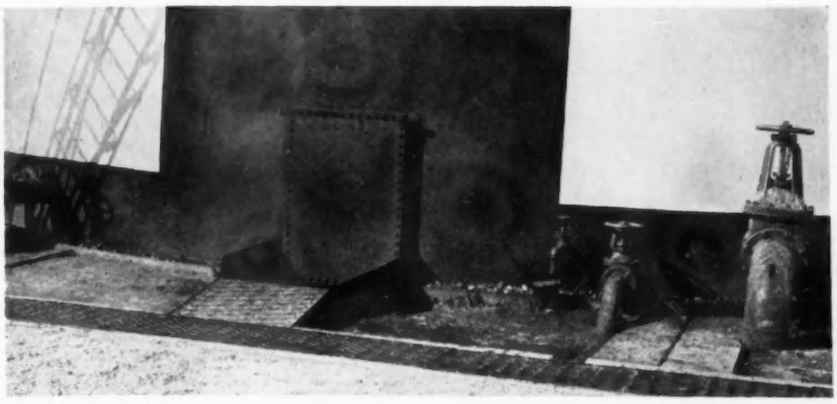
3. CLEANING

Man-hole Flume Aids Tank Farm Upkeep

AS AN AID in cleaning tank bottoms, one company attaches a short flume to the tank below the man-way opening, carrying side boards high enough to prevent spilling of BS and waste oil onto the ground, to run across walks, roadways, and carefully kept-up farm grounds.

The end of the flume at junction to the farm drainage system is covered with a short section of open-mesh steel grating, the outer end of the side board being bevelled.

An incidental gain in the use of the flume was discovered in the saving of bolts, nuts and washers used on the cover plate, the flume acting as catcher or trap.



Short branch from yard drainage system with elevated splash boards confines BS and waste oil at clean-out opening and eliminates much unnecessary yard and walk cleaning.

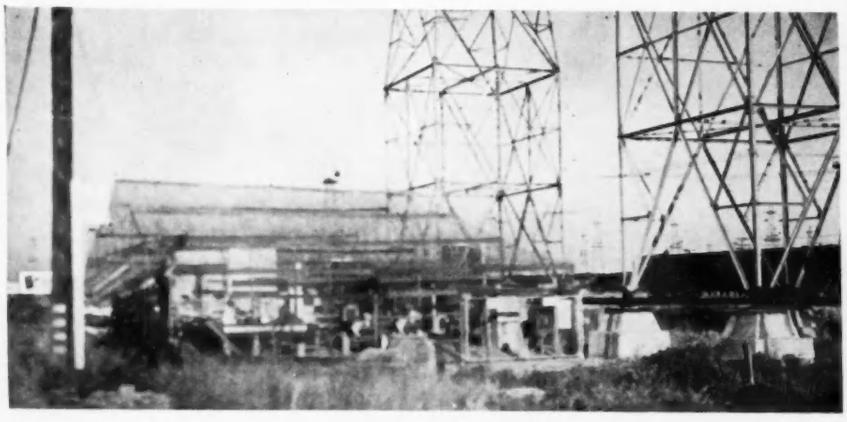
4. PROTECTION

Wire Netting Fends Saboteurs' Missiles

METER stations situated near highways may be afforded a measure of protection by stretching wire netting, closely woven, over a timbered, or metal, frame. The netting should be fabricated to prevent even small grenades from passing through so that when thrown against the vital point, little damage will result.

The enclosure is complete with roof and walls, having gates furnished with substantial locks to prevent saboteurs from entering without tearing the netting apart.

This is in no way intended to protect the measuring station from aerial bombs, but is intended to prevent aliens from causing damage with missiles thrown from a swiftly passing automobile.



Light framework supports housing of closely woven wire mesh entirely around meter station set at side of road, providing safeguard against bombs thrown from passing car or truck.

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[*Continued from page 11*]

must be drilled at the rate of 500 wells a year. Each well would require only 8½ tons of steel.

The order permits drilling for gas on tracts of not less than 40 acres, subject to restrictions as to minimum distance from existing wells and property lines and subject to a further requirement that the material required to drill, complete or provide additions to a well must be on hand and available for such use or must be obtained without the use of priority assistance.

☆

CONNALLY ACT: The Connally "Hot Oil" Act became permanent law June 23 with its signature by the President.

The act, originally proposed to put teeth into the Texas conservation law in 1935 by prohibiting interstate movement of oil produced in violation of state proration orders, was twice extended while Congress wrangled over the desirability of making it permanent, and would have expired by limitation on June 30.

☆

PRICE CEILINGS: Rates charged for seismographic exploration, shot-hole drilling and pipe-line transportation are specifically exempted from control in regulations issued by OPA June 23 placing ceilings on charges for all consumer services connected with commodities, effective July 1.

These and a number of other activities exempted from control were excluded for a variety of reasons not specified in the order, which completes the over-all price control initiated last month with imposition of ceilings on manufacturers' and wholesalers' prices May 11 and on retailers' prices a week later.

The new regulation applies to nearly 1,000,000 establishments, doing an annual business in excess of $5,000,000,000.

☆

CANADA: The War Production Board has issued the order forecast in THE OIL WEEKLY May 25 ("Export Supplies") placing Canadian operators on the same footing as domestic operators so far as priority assistance is concerned, by extending to Canadians the provisions of Preference Rating Order P-98.

Canadian operators will be permitted to use the ratings assigned by P-98 for deliveries of materials to be used for specified purposes, but must apply for a copy of the order to be issued to them individually with a serial number.

Filing of reports and communications and the obtaining of countersignatures by Canadian operators will be handled through the Office of the Oil Controller for the Dominion of Canada, and not through a district office of OPC.

☆

RATIONING: Convoyed tankers to supply fuel oil to the hard-pressed East next winter were intimated last week by Defense Transportation Director Joseph B. Eastman as the Navy Department revealed that it was now convoying merchantmen up and down the Atlantic and Price Administrator Leon Henderson again postponed his permanent-rationing program for the Atlantic States, this time until July 22.

Eastman, meeting in New York with Mayor LaGuardia, did not elaborate on his suggestion of convoys, holding it was a matter under control of Coordinator Ickes, he expressed doubt that the deficiency in the Eastern territory can be entirely eliminated "unless some tank service along the coast under naval protection is brought in.

"The use of wooden barges and the inland waterway along the coast should help solve the fuel oil problem," he added.

Henderson explained that the new coupon system had been deferred to give motorists an additional week to form car-sharing clubs. To carry present ration cards through the extended period, the war bond seal appearing on the cards was made valid for a ration of gasoline, in amounts ranging from three gallons for "A" cards to six gallons for "B-3" cards. Previously, unused coupons had been made good for six gallons instead of three, to carry the cards through the additional two weeks by which the permanent system was first postponed.

Meanwhile, members of Congress expressed increased confidence that nation-wide rationing would be abandoned and moved for another investigation of the whole gasoline situation.

Considerable support is being given the proposal by Senator Francis Maloney of Connecticut, chairman of the special committee which investigated Ickes' warnings of shortage last summer, for revival of his group and an appropriation for an investigation of the shortages of gasoline and fuel oil and of the methods used to provide deliveries "for ordinary consumer use."

☆

EXPORTS: Preparing to put into effect a shipping priority program governing the allocation of space on vessels for exports to the other American republics on the basis of their importance, the Board of Economic Warfare on June 23 classified several hundred commodities, giving a "B" rating to oil and oil products. Highest rating in the list was "A," reserved for a very few commodities of major importance but requiring comparatively little space, and most of the products listed were given "C" or "D" classifications.

☆

SPEED-UP: In a move to assure maximum efficiency and speed in the shipment of petroleum products to American armed forces in every sector of the world, the War Department announced June 24 the establishment of a special petroleum section in the office of the chief of transportation, service of supply.

The organization will be headed by Captain Thomas F. Gunn of Portland, Oregon, formerly assistant sales manager in that state for Standard Oil Company of California.

☆

RAIL MOVEMENT: A new high of 731,760 barrels daily was hung up in the week ended June 20 for railroad deliveries of oil to the East Coast, OPC reported June 26. This was an increase of 240 barrels over the preceding week. With 56,000 cars in the service, 24,392 cars were loaded by 31 companies during the week, carrying 5,122,320 barrels of oil and products.

The Week's News

OPC Estimate 200,000 Barrels More Oil in July

Providing for the anticipated increase of nearly 200,000 barrels a day (THE OIL WEEKLY, June 22) Coordinator Ickes on June 23 recommended a daily production of 3,842,800 barrels of petroleum liquids during July, an output approximately 150,000 barrels a day under actual production in July, 1942.

With the exception of West Virginia and Nebraska, where no changes were made, and Illinois, Oklahoma and Montana, where reductions were recommended, all of the states were given increased allocations, but the greater part of the total increase, 146,000 barrels, went to Texas.

"Most of the increased production recommended has been made possible by the improvement of pipe-line, barge and rail transportation facilities out of the Gulf Coast area," it was explained.

"The increase for California (from 691,900 to 739,500 barrels, where it compared with 677,100 barrels produced in July, 1941) marks the fourth consecutive month that it has been necessary to recommend greater production by that state's oil fields, due to the increasing military demands in the Pacific area.

"The decrease of more than 15,000 barrels daily in the rate for Illinois (from 320,800 to 304,100, where it compared with 353,700 produced last July) reflects the continuing reduction in the productive capacity of the oil pools of that state."

The production rates certified for District 1 call for a total daily output increased from 83,700 to 87,200 barrels, compared with 74,000 barrels in July, 1941, with New York increased from 14,900 to 15,300 barrels and Pennsylvania from 51,000 to 54,100 barrels, with West Virginia unchanged at 17,800 barrels.

District 2 production will drop from 1,148,500 to 1,136,600 barrels, comparing with 1,144,300 barrels a year ago, due to the drop for Illinois and a smaller reduction, from 436,600 to 433,000 barrels, for Oklahoma; Indiana production is increased from 18,900 to 22,000 barrels; Kansas from 281,900 to 283,200 barrels; Kentucky from 13,000 to 14,100 barrels; Michigan from 63,100 to 64,800 barrels, and Ohio, from 10,100 to 11,300 barrels, with Nebraska unchanged at 4100 barrels.

In District 3, production is increased from 1,585,000 to 1,751,900 barrels, which will be about 225,000 barrels under the July, 1941, output of 1,976,500 barrels, with Texas increased from 1,068,600 to 1,214,400 barrels; Louisiana from 311,300 to 319,600 barrels; New Mexico from 80,600 to 89,500 barrels; Arkansas from 75,300 to 78,500 barrels, and Mississippi from 49,200 to 49,900 barrels.

A production total increased from 127,200 to 127,600 barrels is recommended for District 4, comparing with 112,000 barrels a year ago, Colorado being increased from 7600 to 7700 barrels and Wyoming from 96,200 to 96,800 barrels, while Montana is cut from 23,400 to 23,100 barrels.

The required supply of domestic crude oil in July was placed by the Bureau of Mines on June 24 at 3,635,500 barrels a day, 55,500 barrels more than the estimate for June but 323,000 barrels under actual demand in July, 1941.

Motor Fuel 18 Percent Off

The bureau estimated the demand for motor fuel at 53,100,000 barrels, 18 percent under the actual demand for July of last year.

"The total demand for all oils increased over 11 percent in the first quarter of 1942, compared to the same period in 1941, but apparently has dropped between 1 and 2 percent below last year in the second quarter, and will probably show a decline of about 7 percent below last year in the third quarter of 1942," the report commented. "The decrease in domestic motor-fuel demand is the major factor as the demands for most other products show substantial gains.

"The bureau's forecast of total gasoline demand for July of 53,100,000 barrels is based on conditions and measures now in effect and is approximately 15,000,000 barrels less than normal expectations. This anticipated decline is due to reduced use of motor vehicles to conserve tires and to the results of gasoline rationing over and above the tire situation. The combined effect of these two factors probably will eliminate the usual summer peak in gasoline demand.

"Adiustments at refineries in the last two months to meet the lack of balance in demand for products is indicated by a drop of about 5 percent in normal seasonal gasoline yields from crude with an increase of about 4 percent in normal residual yields and smaller increases in the yield of other products.

"From current indications, part of the estimated national demand for domestic crude in July will be supplied by further liquidation of stocks of Illinois and Oklahoma origin due to the transportation situation."

The bureau found that daily average crude production during the four weeks ended May 30 was 3,626,000 barrels a day and total runs to stills were 3,451,000 barrels, while during the period stocks of domestic crude declined an average of 143,000 barrels daily, indicating a demand for domestic crude of 3,769,000 barrels.

Stocks of finished and unfinished gasoline amounted to 101,822,000 barrels April 30, with the American Petroleum Institute statistics indicating a decline of about 6,700,000 barrels during May. The bureau estimates a further withdrawal of 5,500,000 barrels in July.

Direct sales of natural gasoline were estimated at 1,500,000 barrels, making an indicated refinery production of 46,100,000 barrels, which the bureau distributed among the various refining districts as follows: East Coast, Inland Texas, Texas Gulf Coast, Louisiana Gulf Coast and Inland Louisiana-Arkansas, 19,150,000 barrels; Appalachian, 2,090,000 barrels; Indiana, Illinois, Kentucky, etc., 10,990,000 barrels; Oklahoma, 2,700,000 barrels; Kansas, 2,930,000 barrels; Rocky Mountain, 1,340,000 barrels; California, 6,900,000 barrels.

Natural gasoline to be blended at refineries was placed at 3,670,000 barrels. The yield of gasoline from crude was estimated at 39 percent, which, applied to the straight-run and cracked production of 42,430,000 barrels, gives total crude runs of 108,800,000 barrels, or 3,510,000 barrels daily.

Crude for export and to be used as fuel, and losses, is estimated at 5,400,000 barrels, making an estimated demand for domestic crude of 112,700,000 barrels, or 3,635,500 barrels daily.

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Wyoming 58

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Texas July Allowable Set Under OPC Figure

The Texas Railroad Commission's order for July provides an estimated production of 1,209,482 barrels of crude oil and other petroleum liquids. This figure is approximately 5000 barrels less than the 1,214,400 barrels estimated by OPC as the daily requirement from the state during the period.

No material allowable changes were made for individual fields, except that East Texas field will have 14 shutdown days during the month while other areas will close in 11 days to keep output at the required level.

It was estimated the allowable will permit production of 1,184,711 barrels of crude oil daily, however, underproduction of 6.35 percent or 75,229 barrels daily is expected. This reduces the estimated crude oil allowable to 1,109,482 barrels daily.

Other liquids are estimated at 100,000

barrels, so total production will be 1,209,482 barrels.

Last week OPC sent to Austin a statistician who compared the method of estimating in Texas with that used by Washington. He agreed that the adjustments made were proper.

Commissioner Olin Culberson said he thought Washington and Austin would have less difficulty from now on because of the contact which has been established and which it is expected will be maintained.

Texas fields will be shut down on July 4, 5, 11, 12, 18, 19, 25, 26, 29, 30 and 31. East Texas will be shut down on these days and also on July 6, 13 and 20.

The district allowables of crude oil production for July 1 are as follows:

1—Southwest Texas	18,055
2—Southwest Texas	61,668
3—Gulf Coast	213,849
4—Southwest	90,435
5—East Central	18,409
6—East Central	66,182
East Texas Field	285,227
7-B—West Central	26,522
7-C—West Central	18,137
8—West Texas	182,241
9—North Texas	121,987
10—Panhandle	81,999

Michigan Proposal Would Lower Oil Output

Lowering of individual well allowables from 170 to 150 barrels for 20-acre units and from 297½ to 262½ barrels for 40-acre units has been recommended by the Michigan Oil Advisory Board. If approved by P. J. Hoffmaster, state well supervisor, the order will become effective July 1.

F. R. Frye, state petroleum engineer, estimated that the reduced allowable would lower the total daily average production from 69,000 to 65,000 barrels per day and would be "adequate to meet the in-sight demand both in and out-state."

Frye said the action of the board resulted from new studies of the Reed City field in particular where the present rate of withdrawal has resulted in a steady rise in gas/oil ratios, loss of reservoir pressures and "some added encroachment of water."

The new proration will apply to Reed City, Winterfield, Adams and Headquarters pools.

Court Rules Everybody Can Run for Jerry's Job

The Texas Supreme Court ruled finally that the State Democratic Executive Committee acted within its powers when it opened the ticket to late filing for the office of railroad commission from which Jerry Sadler resigned. The court heard arguments last Thursday and announced its decision Friday. It said that no motions for rehearing would be permitted.

The court specifically "refrained" from determining whether a vacancy exists in the office. Thus all eleven candidates will have their names on the ticket but will not know whether the office for which they are running is open.

Governor Coke Stevenson has said that he will appoint the nominee. When this has been done and the candidate is sworn in, most attorneys believe that it will be up to Sadler to sue, alleging usurpation of his office if he is not willing to permit the successful candidate to serve.

Arkansas Sour Gas Fields Reduced More Than Half

Daily allowables of gas condensate in the Dorcheat and Macedonia fields in Columbia County, Arkansas, were cut to 50 barrels each per well, and in the McKamie field in LaFayette County, daily allowable was set at 75 barrels per well, following a state-wide hearing of the Arkansas Oil and Gas Commission at Magnolia Friday. This will cut waste of sour gas in these fields from 50,000,000 cubic feet daily to 14,000,000 cubic feet daily.

Testimony was also offered showing the need for immediate dual completion of wells in the Dorcheat and Macedonia fields to furnish gas for Arkansas war industries. Chairman O. C. Bailey said, in view of the need for the sweet gas, the commission would recommend to OPC that blanket authority for dual completions be granted under the supervision of the state commission, so that it would not necessitate operators shutting down rigs for costly delays while awaiting approval of individual dual completion tests from Washington.

State Below OPC

The daily allowable for the state was set at 73,915 barrels. OPC had recommended 78,500 barrels for July. This figure includes 2000 barrels of natural gasoline and 71,915 barrels of oil.

Slashing more than half the allowable for the three fields rather than shutting them in entirely, the commission made it possible for wells in these fields to continue to receive fuel for drilling purposes and will allow the pipe line movement of oil to the East to be speeded up by the addition of light condensate to the heavier crude from East Texas.

For the Dorcheat field the total daily allowable will be cut from 2226 barrels to 1050. The 11 producing wells in the Macedonia field will be cut from 143 barrels daily to 660 barrels, while in the McKamie field the total daily allowable for the 15 producers was cut from 2625 to 1125 barrels.

In the Midway field, LaFayette County, the total allowable was increased 1000 barrels per day to 3700 barrels. Columbia County's Atlanta field drew an increase of 126 barrels per day to total 2893 barrels for the 21 wells. A reduction of 363 barrels was made in the Buckner field bringing total daily production to 2000 barrels.

Mexico Expropriated Companies Still in Dark

Although, under the agreement reached by American and Mexican commissioners in Mexico City the time draws near for the first payment by the Mexican government to American oil companies for properties expropriated by Mexico, the American oil companies involved in the settlement had not been called by Washington into conference on the subject late last week. The companies were advised, shortly after news of a proposed agreement was made public several weeks ago, that they would be asked to send representatives to Washington to discuss the settlement.

The agreement concerning the amount which Mexico would pay American oil companies for expropriated properties, was made without consultation with the American companies and the amount agreed upon by American and Mexican commissioners was far less than the values at which the properties were held by the American companies.

In the meantime there seems to be considerable confusion as to just what some of the paragraphs of the settlement mean. There was some fear that the claims of union workers against the companies for alleged rupture of labor contracts might be taken out of the funds which the Mexican government agrees to pay for the expropriated properties. However, word from Mexico City last week, which could not be officially confirmed, indicates that "The 117,000,000 claim of the workers for rupture of labor contract was not included in the charge against the companies and was 'all washed out.'" This claim amounted to more than the sum which the Mexican government, through its commissioners, agreed to pay for the properties involved.

Some private claims, it is understood, will be considered before payment, among them items referring to legitimate labor wages and savings funds.

Also a paragraph of the settlement specifies that the government of Mexico will assume responsibility of all the private claims which may be instituted after date of settlement by individuals against these companies and as a result of expropriation. Just what this means is not clear, and this paragraph may be the subject of further discussions between the joint commissioners.

All sorts of rumors are current in Mexico as to promises or private pledges of cooperation on matters pertaining to possible purchase of Mexican oil by the United States and rehabilitation of Mexican fields and refineries with United States government capital. Thus far they are only rumors.

One thing seems to be noticeable. Apparently the Mexican and American governments had anticipated that settlement of the Mexican expropriation matter would result in a flow of private American capital to Mexico. Such very definitely has not been the case.

Claim British Columbia Shale Important Oil Source

A claim that there is enough crude oil in Graham Island shale deposits to make British Columbia independent of outside petroleum supplies was made before the Post-war Rehabilitation Council at Vancouver, B. C., recently by E. S. Estlin, Vancouver civil engineer.

Ten claims had been staked and a Vancouver company was about ready to explore them, when a reserve was placed on the property by the provincial government June 22, 1940, Estlin told the council.

He added that he had taken the matter up with the federal oil controller, at the suggestion of provincial authorities, but got nowhere.

Estlin's statements were corroborated by George Kerr, oil well driller who sank a well into the shale to 1600 feet in 1915 but had to abandon it when English capital was cut off by the First Great War.

"We need to go down to 2500 feet but we found enough at 1600 to convince us of the possibilities," said Kerr.

He added that four Royal Reserve engineers from Great Britain examined the property at that time and said crude oil could be produced for 65 cents a barrel.

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Markets Remain Strong; Light Fuel Oils Scarce

Markets continue generally strong, and although prices are unchanged under government restrictions, there is considerable dissatisfaction in the industry with prevailing prices, which result in loss for many companies, particularly in the East Coast and Pacific Coast districts, because of high transportation and other costs.

Agitation seeking upward revision of prices is increasing, and government price control officials apparently are feeling the pressure of demands from within the industry for stopping of losses.

OPA is reported to be opposed to increasing prices of heavy fuel oils, because of the danger of inflationary effects that would result from boosting costs of public utility companies. The agency is said to be contemplating, however, advances in prices of gasoline and light fuel oils.

Reports are being circulated, meanwhile, of conflicts of opinion between OPA and OPC regarding oil prices, and of the possibility that one or the other of those agencies may be given fuller authority over the oil industry, at the expense of the other.

All products remain scarce on the East Coast, with current consumption largely absorbing available supplies and permitting no material additions to storage. There is particular concern over heating oils and kerosine, which will be very scarce next winter, and jobbers and consumers are attempting to build up storage, although restrictions on deliveries make that difficult.

No change has been reported in the sluggish market on the Gulf Coast, with tanker movements virtually eliminated, and with shipments by tank car the principal market outlet.

The Middle Western market naturally remains strong, as shipments to the East compete with normal movements within the district. Fuel oil supplies are short, and shipments of gasoline eastward are heavy.

In the Mid-Continent, all products continued in strong demand, despite rains that delayed the wheat harvest in some sections.

Western Pennsylvania refiners are encountering strong demand for their products, being unable to take care of all potential business.

Federal Gasoline Tax Drops During May

Federal gasoline tax collections in May dropped $9,000,000 under the corresponding month last year, but receipts from pipe-line transportation, reacting to the greater emphasis on that method of delivery, showed an increase over the preceding month, the Bureau of Internal Revenue reported June 23.

Gasoline-tax collections for the month were $26,394,385, compared with $26,574,912 in April and $35,403,683 in May, 1941, the bureau announced. Receipts from the lubricating-oil tax were $3,660,255 against $3,961,780 in April and $4,163,716 last May, and revenue from pipe-line transportation was $1,112,523 against $993,650 in the preceding month and $1,043,232 last year.

For the five months ended with May the bureau reported gasoline revenue of $140,795,982 against $139,184,634 in the corresponding 1941 period; lubricating oil, $16,913,842 against $16,233,269, and pipe-line transportation, $5,651,265 against $5,169,623.

Trends of Operations and Changes in Stocks

Figures on crude stocks are from Bureau of Mines weekly reports; all others from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines basis.

ITEM	Crude Oil Prod. Bbls. Day (Add 000)	Crude Oil Prod. Week Ended	Runs to Stills Bbls. Day (Add 000)	Runs to Stills Week Ended	Crude Stocks Bbls. (Add 000)	Crude Stocks Week Ended	Gasoline Stocks Bbls. (Add 000)	Gasoline Stocks Week Ended	Gas Oil & Distillate Stocks Bbls. (Add 000)	Gas Oil & Distillate Stocks Week Ended	Residual Fuel Oil Stocks Bbls. (Add 000)	Residual Fuel Oil Stocks Week Ended
Highs:												
1939	3,910	8- 5	3,650	10-21	278,607	5-26	87,769	4-22	39,562	10-28	116,237	8-26
1940	3,890	3-16	3,690	6-22	265,865	8-31	102,817	4-20	49,051	10-19	109,135	9-14
1941	4,337	11-22	[1]4,120	10-18	266,187	3-29	99,727	3-29	[1]54,983	11-15	102,448	1- 4
1942	[1]4,337	2- 7	3,961	1- 3	263,208	3-28	[1]107,229	3-14	49,357	1- 3	95,857	1- 3
Lows:												
1939	[2]1,601	8-26	3,125	2-18	[2]229,127	10-21	71,152	10- 7	20,722	4-15	105,397	4- 8
1940	3,335	11-30	3,370	1- 6	237,339	1-27	79,847	11- 9	23,551	4- 6	102,344	2-10
1941	3,364	1-11	3,490	1-18	240,399	11-15	80,870	10- 4	28,381	4-12	92,635	7- 5
1942	3,418	5- 2	3,393	5-23	244,364	1-10	89,847	6-20	29,240	4-25	78,478	6-20
Trends in 1942 Week Ended):												
Jan. 3	4,038	.....	3,961	.....	244,440	.....	92,987	.....	49,357	.....	95,857	.....
Jan. 31	3,871	.....	3,848	.....	250,740	.....	97,810	.....	40,674	.....	91,189	.....
Feb. 28	4,016	.....	3,675	.....	259,373	.....	105,635	.....	34,547	.....	88,285	.....
Mar. 28	3,820	.....	3,667	.....	263,208	.....	105,624	.....	31,756	.....	83,045	.....
April 25	3,581	.....	3,506	.....	257,073	.....	102,897	.....	29,240	.....	81,107	.....
May 30	3,877	.....	3,522	.....	255,023	.....	95,355	.....	31,384	.....	79,628	.....
June 6	3,602	.....	3,451	.....	254,316	.....	93,305	.....	31,535	.....	79,556	.....
June 13	3,700	.....	3,478	.....	253,386	.....	91,994	.....	31,276	.....	78,759	.....
June 20, 1942	3,721	.....	3,434	.....	.....	.....	89,847	.....	32,204	.....	78,478	.....
June 21, 1941	3,858	.....	3,870	.....	[4]260,464	.....	90,874	.....	37,758	.....	91,730	.....
Change:												
In week	+21	.....	—44	.....	—930	.....	—2,147	.....	+928	.....	—281	.....
In year	—137	.....	—436	.....	—7,078	.....	—1,027	.....	—5,554	.....	—13,252	.....
In year	—3.6%	.....	—11.3%	.....	—2.7%	.....	—1.1%	.....	—14.7%	.....	—14.4%	.....

[1] All time peak. [2] Lowest since April, 1922. [3] Lowest since October, 1922, due to shutdown of six Mid-Continent states.
[4] Stocks, June 14, 1941.

Attention Centered on Providing Fuel Oils

Statistics covering the week ended June 20, revealed a continuance of the difficulty of providing enough of several major products, particularly the fuel oils with transportation inadequate.

Refinery runs of crude oil were reduced by 44,000 barrels to 3,434,000 daily. That figure was only 43,000 barrels above this year's low of 3,393,000 barrels daily that was reached a month ago. At the new rate, plants were operating at 73.3 percent of capacity compared with 74.3 percent the previous week. The refinery runs of the June 20 week were 436,000 barrels, or 11.3 percent, under the corresponding week last year. This decrease apparently reflects fairly well the reduction in the demand.

The reduction of 44,000 barrels in crude runs for the recent week was accounted for by the East Coast and the Southwest which normally helps to supply that district. Runs were higher in the Appalachian, Middle Western, and upper Mid-Continent districts. California and the Rocky Mountain states slightly reduced runs. Plants of the combined East Coast and Southwestern districts processed 1,493,000 barrels of crude daily, which was 63,000 barrels a day less than in the previous week.

Whereas additions of light fuel oils to storage in recent previous weeks had been decidedly subnormal, there was during the week of June 20 approximately a normal build-up, amounting to 928,000 barrels in United States stocks. Inventory rose from 31,276,000 to 32,204,000 barrels. The latter figure was, however, 5,554,000 barrels or 14.7 percent less than the 37,758,000 barrels reported on June 21, 1941. The additions to stocks of light fuel oil were well distributed, only the Rocky Mountain states having failed to add to storage. California added 331,000 barrels, the combined East Coast-Southwestern districts 340,000, Indiana-Illinois-Kentucky 159,000 barrels, Oklahoma-Kansas-Missouri 72,000, and the Appalachian 27,000.

Success in providing light fuel oil in better relation to demand was achieved, partly at the expense of gasoline and heavy fuel oil. Gasoline stocks were reduced over 2,000,000 barrels and stocks of residual fuel oil were lowered 281,000 barrels.

Withdrawal of gasoline was larger than normal for this season, and gasoline stocks now are smaller than a year ago, whereas they have been heretofore above the 1941 trend. Having been reduced from 91,994,000 to 89,847,000 barrels during the week ended June 20, a reduction of 2,147,000 barrels, gasoline stocks now are 1,000,000 barrels or 1 percent lower than at this time last year.

Mainly responsible for the 2,000,000-barrel reduction in gasoline stocks for the week ended June 20 were the Middle West and the East Coast-Southwest, the former district showing a withdrawal of 1,083,000 barrels and the latter a decrease of 768,000 barrels. There were smaller reductions in the Appalachian,

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upper Mid-Continent and Rocky Mountain districts. California added 37,000 barrels.

As in the several preceding weeks, principal difficulty in supplying heavy fuel oil was in California. That state further dipped into stocks by 526,000 barrels and then had storage of 55,375,000 barrels. The Rocky Mountain states apparently shipped heavy fuel oil to the West Coast again, having withdrawn 26,000 barrels from storage. East of the Rocky Mountains, the only district that drew on stocks was Oklahoma-Kansas-Missouri, which took out 16,000 barrels. For the rest of the region there was an addition of 287,000 barrels, of which the Middle West added 51,000 barrels, the Appalachian states 21,000, and the East Coast-Southwest 215,000 barrels. For the nation as a whole, there was during the week a decrease of 281,000 barrels in residual fuel oil stocks, to a new total of 78,478 000 barrels. The latter figure was 13.252,000 barrels or 14.4 percent under the 91,730,000 barrels on hand June 21, 1941.

Crude oil production has continued well balanced with demand, as attested by further moderate withdrawals from storage. Crude stocks totaled 253,386,000 barrels on June 13, the Bureau of Mines reported. That agency had shown 254,316,000 barrels on hand June 6 and 255,023,000 on May 30. The new total of 253,386,000 was 7,078,000 barrels or 2.7 percent under the 260,464,000 barrels reported on June 21, 1941.

Production About Same Despite State Changes

Production of petroleum in the United States averaged 3,738 205 barrels daily during the week ended June 27. That output was higher by the slight amount of 2280 barrels than the production in the previous week and was 101,905 barrels above the daily average recommended for June by the Office of Petroleum Coordinator.

While the nation as a whole showed only the slight change, there were considerable fluctuations among the states. Arkansas increased 100 barrels over the previous week's rate to 73,850 daily, Louisiana from 308,450 to 308 900, Mississippi from 81,600 to 83,350, New Mexico from 65.600 to 76,650, and Texas from 1,280,950 to 1,325,130.

On the other hand, California declined from 672,800 barrels daily in the week ended June 20 to 640,800 daily for the week of June 27, Illinois from 280.150 to 276,850, Kansas from 279,850 to 272,100, Michigan from 69,650 to 65,100, and Oklahoma from 377,600 to 369,300.

Ritchie Field Price Raised by OPA

At the request of the Sun Oil Company and Continental Oil Company, M. L. Vincent, Jr., L. C. Welch and E. H. Nickles, constituting all the parties interested, the Office of Price Administration on June 22 made retroactive to February 2, last, the maximum price of $1.48 per barrel for Ritchie field, Louisiana, crude of 40° A.P.I. gravity or above which was established April 23.

It was explained that at the time of the filing of the request for an increase in the ceiling price, the parties at interest urged that it be made effective as of February 2, when the original petroleum price schedule went into effect.

Franklin Sees Further Drilling Restrictions

Restrictions on delivery of drilling equipment and more "selective drilling" were forecast by Wirt Franklin, chairman of District 2, OPC, in an address before the Michigan Oil and Gas Association last week.

Franklin said the only cheerful news was the possibility that Michigan might be given a preferred status because of of its geographic position and transportation advantages in respect to the East Coast.

He made the address at the association's annual stag meeting in Lansing.

Pressing Development Work in Alberta

Recent developments demonstrate the determination of authorities to press development of proven oil structures and the testing of wildcat fields for new structures in Alberta.

Areas not yet developed out along the 20-mile proven length of Turner Valley are being intensively drilled, while at the same time efforts are being made to extend the field both to the north and south.

Further drilling progress in the southern extension are awaiting results of the most southerly test North West Hudson's Bay 8, now over 2100 feet in depth.

In the northerly extension, Major 9 has been drilled in the upper and lower porous producing zones, in the deep-seated Madison limestone.

The results obtained at this well justify the drilling of a considerable strip along the northerly extension of the east flank of the Turner Valley anticline. In fact, Major 9 is the first well drilled on the easterly dip of the anticline, all others being on the dip on the west side of the crest.

It now seems clear that a large number of tests which have raced northward ahead of production on the westerly dip or flank will be reviewed by the interested authorities and operators with a view to arranging an orderly and progressive testing to the north of this promising formation. One plan is to select three wells at intervals best suited for such a controlled test of the 11- or 12-mile extension so affected. It is felt by the interests concerned that it is unwise to proceed simultaneously with all of the 30 or more operations in the area.

In the proven portion of the north extension of Turner Valley the industry anticipates completion in quick succession during the next three months of some 20-odd wells. Inasmuch as north end completions have shown a high percentage of wells exceeding 500 barrels a day, maintenance of Turner Valley production for some time to come can be anticipated.

Outside of Turner Valley the principal contribution to increased production is coming from Vermilion where there are some 16 oil wells on production and an extensive drilling program is in progress. The mountain division of the National Railways is burning Vermilion fuel oil conditioned at the plant of Vermilion Consolidated, situated in the field. Recent additions to producers in that area are Alberta Southern, Richardson 1 and Princeville 2, from which last-mentioned well a Vancouver laboratory has produced a sample of synthetic rubber.

Petroleum Production in the United States

(Estimates compiled by The Oil Weekly. All figures indicate daily averages, in barrels)

STATE OR DISTRICT	[1]OPC Allocation in June	PRODUCTION IN WEEK ENDED June 20	PRODUCTION IN WEEK ENDED June 27
Arkansas	75,300	73,750	73,850
California	691,900	672,800	640,800
Long Beach		37,100	36,000
Midway-Sunset		56,800	53,700
Kettleman Hills		36,800	35,700
Wilmington		89,500	90,200
Rest of State		452,600	425,200
Colorado	7,600	7,100	7,050
Illinois	320,800	280,150	276,850
Salem		44,450	42,250
Louden		51,650	50,350
Other New Pools		171,900	171,950
Old Pools		12,150	12,300
Indiana	18,900	20,100	20,450
Kansas	281,900	279,850	272,100
Kentucky	13,000	12,300	12,550
Louisiana	311,300	308,450	308,900
North		88,700	88,500
South		219,750	220,400
Michigan	63,100	69,650	65,100
Mississippi	49,200	81,600	83,350
Missouri		130	130
Montana	23,400	22,550	23,150
Nebraska	4,100	3,850	3,900
New Mexico	80,600	65,600	76,650
New York	14,900	13,250	13,400
Ohio	10,100	9,650	9,900
Oklahoma	436,600	377,600	369,300
Oklahoma City		73,950	69,800
Seminole Area		93,900	92,300
Rest of State		209,750	207,200
Pennsylvania	51,000	53,450	52,400
Tennessee		30	30
Texas	[1]1,068,600	1,280,950	1,325,130
Upper Gulf Coast		242,850	281,230
East Texas Field		362,450	295,400
Rest of Eastern Texas		94,150	93,900
Lower Gulf Coast		83,650	97,950
Southwest Texas		44,350	49,950
South Central Texas		15,850	15,600
West Texas		205,050	235,000
North Texas		143,900	149,250
Panhandle		88,700	106,850
Utah		15	15
West Virginia	17,800	9,750	9,700
Wyoming	96,200	93,350	93,500
Total United States	3,636,300	3,735,925	3,738,205

[1] Production rates recommended for states by Office of Petroleum Coordinator, on basis of Bureau of Mines forecast of the nation's daily average requirements for domestic crude during month. State conservation authorities except Texas Railroad Commission have prescribed allowables calculated to hold actual production within OPC regulations. (Details on state allowables published in The Oil Weekly of June 8, 1942, page 47.)

[2] Actual production of crude oil and other petroleum liquids in Texas expected to average 1,209,340 barrels daily in period June 15-June 30, under railroad commission order, taking into consideration shutdowns in most fields of June 20, 21, 28, 29, and 30; East Texas fields will be closed in on those days and in addition on June 23 and 27.

Propose Deep Test in Dominican Republic

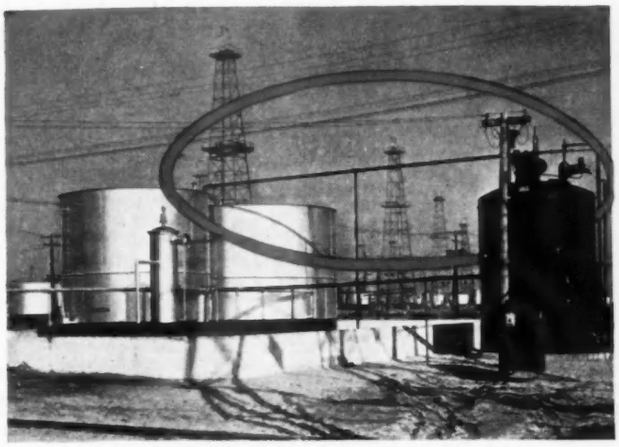
Dominican Seaboard Oil Company, following completion of a portion of its exploratory work in the Dominican Republic, plans a drilling program in two localities this year. Drilling is expected to begin as soon as equipment can be received.

The company will drill a deep test on the Comendador structure, where no drilling has occurred, which is close to the border of Haiti and 75 miles west of the Dominican town of San Juan. The company will also drill several shallow wells on the Maleno anticline 6 miles northwest of Azua. Dominican Seaboard Oil Company drilled two small producers there several years ago, these wells at present being closed in.

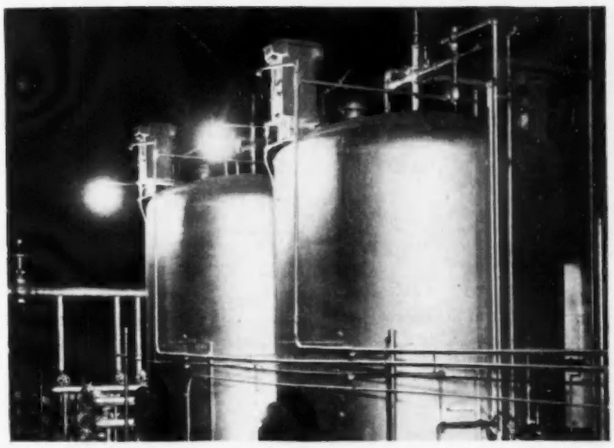
The company expects to maintain a geological party in the country this year.

These **PETRECO** *Features*

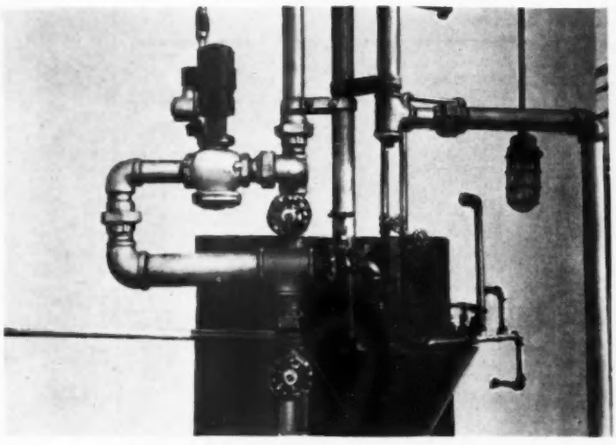
INSURE EFFECTIVE DEHYDRATION



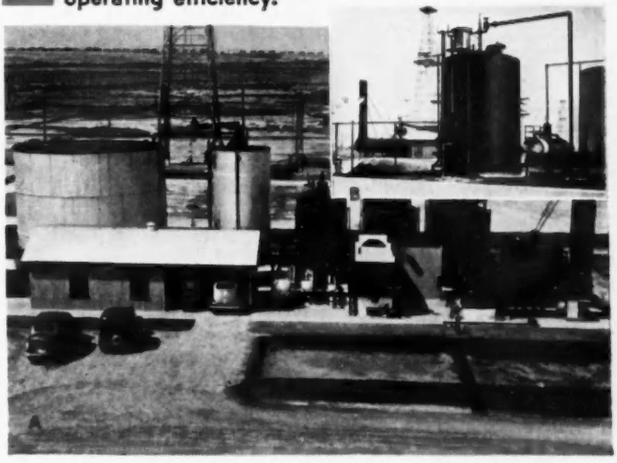
1 Petreco's vapor-tight flow system . . . prevents evaporation losses and retains true gravities.



2 Automatic cut indication . . . the brightness of Petreco unit pilot lights indicate the degree of operating efficiency.



3 Automatic water bleeder . . . reduces to a minimum necessary attention and manual adjustment.



4 Adaptability and flexibility . . . Petreco Dehydrators are adaptable to virtually any flow plan; for batch plants (A) or single flow line units (B).

5 Petreco Research . . . designed to assure an authoritative source of dehydration information . . . to assist producers with any emulsion problem.

PETROLEUM RECTIFYING COMPANY OF CALIFORNIA

530 West Sixth Street, Los Angeles, California
5121 South Wayside Drive, Houston, Texas
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Representatives in all Principal Oil and Refining Centers

PETRECO
DEHYDRATING DESALTING

Data on Properties and Working of Free-Machining "KR" Monel

A strong, corrosion-resistant alloy suitable for machining parts which may be hardened by thermal treatment

The new INCO Nickel Alloy, "KR" Monel,* possesses the same combination of properties as "K" Monel.* Equally rustless and resistant to corrosion, it can be hardened by the same treatment to obtain the range of strength, ductility and hardness shown in table below. Like "K" Monel, this alloy is also non-magnetic. However, its machining characteristics are much superior to those of "K" Monel.

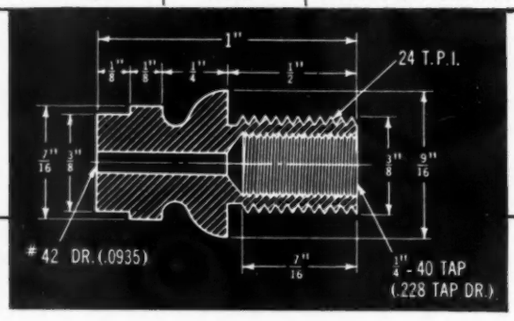
Machining data appear in the sketch and work sheet of operations on a practical job. For more detailed instructions, send for the new, revised edition of Bulletin T-12, "Machining Monel, Nickel and Inconel." Address:

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street New York, N. Y.

TABLE OF OPERATIONS

Operation	Rev. Per Min. Spindle	Rev. Per Min. Attachment	Surface Ft. Per Min.	Feed Inches	Remarks
Form	560	....	82	.00025	
Box Tool	560	....	82	.003	
No. 1 Drill	890	....	54	.002	L.H. Drill
No. 42 Drill	890	1600	60	.0015	L.H. Drill Drilling Attachment
Thread	560	308	25	.0416	Threading Attachment
Tap	560	183	25	.025	Tapping Attachment
Cut Off	560	....	82	.0002	

Material—9/16" dia. cold drawn as drawn (not age hardened) "KR" Monel
Machine—No. 2 B & S Automatic Screw Machine
Forward speed of spindle—560 R.P.M.
Backward speed of spindle—890 R.P.M.
Tool—high speed steel (18-4-1 Type)
Cutting lubricant—sulfurized oil



"Monel" and other trade-marks which have an asterisk associated with them are trade-marks of The International Nickel Company, Inc.

MECHANICAL PROPERTIES OF "KR" MONEL

Rods and Bars—Cold Drawn	Tensile Strength 1000 p.s.i.	Yield Strength (0.20% Offset) 1000 p.s.i.	Elongation in 2 in. per cent	Brinell Hardness 3000 kg.
Annealed	90-110	40-60	45-35	140-180
Annealed, age hardened	130-150	90-110	30-20	240-260
As drawn	100-125	70-100	35-15	175-250
As drawn, age hardened	140-170	100-130	30-15	260-320

INCO NICKEL ALLOYS

MONEL • "K" MONEL • "S" MONEL • "R" MONEL • "KR" MONEL • INCONEL • NICKEL • "Z" NICKEL

Sheet... Strip... Rod... Tubing... Wire... Castings

U. S. Field Operations

Illinois Basin

Rising Sun Extended; White County Test Shows

White County well near Carmi drilling plug to test McClosky, Rising Sun field, given half-mile northwest extension. Richland County wildcat swabs 315 bbls a day.

White County: White Eagle Oil Co. and F. H. Brown's Britt 1, NE NW SE 23-5s-9e, drilling plug to test McClosky 3147-54 ft; test is half-mile southwest of Carmi and had light but probably noncommercial shows in Cypress and Aux Vases.

R. H. McElvain Poole-Parr 1, C NE NW 13-6s-10e, shows for 200 to 250-bbl well in Aux Vases at 2740-55 ft, to extend Rising Sun field half-mile northwest.

Richland County: Gulf - Helmerich-Payne's Stiff 1, SE NE NE 35-5n-10e, near Dundas, shows for pool opener after swabbing at the rate of 315 bbls a day in 15-hr test of McClosky at 3107-11 ft.

Wayne County: Gulf's Blackburn-Thomas 1, NE NE 30-1s-7e, first offset to Deep Rock's pool opening Blackburn 1, is waiting after squeeze job. When plug was drilled to McClosky 3242-46 water and show of oil were recovered. Discovery well was initialed at 1000 bbls a day.

Gallatin County: Sinclair-Wyoming's Cox 1, SW SW SW 24-7s-8e, mile south of White County's Roland field, set casing at 2623 ft to test Cypress topped at 2621 ft, elevation 395 ft. On 60-minute drill stem test 60 ft of oily mud were recovered.

Washington County: Gulf's Leffner 1, NW NE NW 13-3s-2w, wildcat south of Ashley, swabbed 1½ bbls oil and 2 bbls of water an hour after perf at 1178-86 ft in Cypress, following plug back from Benoist.

ILLINOIS FIELD COMPLETIONS

Clay County—Pure's Pierce 6, se sw 15-2n-8e, Rosi 3004-14 ft, Weil 2648-63 ft, 92 bbls, 3058 ft.

Texas Co.'s Nadler 1, nw sw sw 4-5n-7e, Weil 2484-2506 ft, 278 bbls, 2884 ft.

Gulf's Storck 2, sw se 5-5n-7e, Weil 2490-2510 ft, McC 2801-33 ft, 80 bbls, 2833 ft.

Clinton County—Texas Co.'s Gray 1, ne se sw 35-3n-2w, Ben 1184 ft, 215 bbls, 1211 ft.

Murphy & Goldsmith's Goldsmith 1, ne ne nw 2-2n-2w, Ben 1180 ft, 240 bbls, 1203 ft.

Edwards County—Tide Water's Hocking 1, cw½ se nw 7-1s-11e, McC 3199-3208 ft, 1118 bbls, 3208 ft.

Tide Water's Gawthrop 4, cw½ ne sw 18-1s-11e, McC 3186-92 ft, 92 bbls, 3213 ft.

Franklin County—Seaboard's U. S. Coal 3, se se 14-6s-4e, salt water disposal, 3515 ft.

Gallatin County—Carter's Jordan 1, ne ne ne 21-8s-10e, Walts 1986-2006 ft, Weil 2391-2410 ft, 96 bbls, 2421 ft.

Hamilton County—Shell's Hatcher "A" 1-A, 50 ft w of sw se se 11-6s-5e, abnd 3440 ft.

Shell's Hungate 1, 208 ft w of ne nw sw 24-6s-5e, L O'H 3238-52 ft, 397 bbls, 3332 ft.

Texas Co.'s Johns 1, 30 ft s of cw½ ne se 34-6s-6e, AV 3019-42 ft, 218 bbls, 3067 ft.

Shell's Morris 2, nw ne nw 18-6s-7e, AV 3019-42 ft, 218 bbls, 3067 ft.

Jasper County—S. Lebow et al's Ochs-Reis 1, ne ne 7-5n-14w, McC 2848-66 ft, 564 bbls, 2866 ft.

Pure's Keavin 1, nw ne 7-5n-10e, McC 2842-50 ft, 2866-72 ft, 606 bbls, 2882 ft.

Jefferson County—Skelly's Woodlawn Bk. 2, nw sw sw 1-3s-1e, Ben 1946-54 ft, 1111 bbls, 1954 ft.

Richland County—Pure's Snyder 6, sw sw 3-3n-9e, Weil 2579-82 ft, 21 bbls, 2582 ft.

Nolf Oil Co.'s Sterchi 2, cs½ ne nw 6-4n-14w, abnd 3057 ft.

Results on Industry's Prospecting Fronts

Tabulation of wildcat completions (see table below) added 83 tests finished, of which 13 were oil producers. Total for the year is 1412, or about a third short of the rate estimated required for the year.

Michigan: Completions at new high for year; eight wildcats include a field discovery.

California: Ventura County outpost produces.

Colorado: Project test to Ordovician.

South Louisiana: Terrebonne wildcat nearing depth record.

Texas Coast: Wilcox productive in Polk County.

East Texas: Two wildcats added as producers.

Pure's Boley A2, ne ne 28-4n-9e, abnd 3066 ft.

Wayne County—Central Pipe Line's Edminson 1, 90 e of sw sw 17-1s-5e, abnd 3086 ft.

Texas Co.'s Harlan 1, 10 ft n of cw½ sw sw 22-1s-6e, McC 3190-3218 ft, L O'H 3136-42 ft, 287 bbls, 3218 ft.

Texas Co.'s Johnson 1, sw ne se ne 32-1s-6e, abnd 3182 ft.

Pure's Adams 1, sw ne 36-1s-7e, McC 3339-46 ft, 59-63 ft, 215 bbls, 3363 ft.

White County—Sun's Henning 1, sw nw 33-4s-14w, gas input 2729 ft.

Skelly & McBride's Bryant Unit 1, sw se 7-4s-10e, T Spgs 2448-93 ft, 519 bbls, 2528 ft.

Carter's Allen 1, ne sw nw sw 15-7s-8e, Walts 2166-75 ft, 124 bbls, 2175 ft.

Sun's Ford "B" 2, sw nw ne 21-4s-14w, AV 2830-68 ft, 155 bbls, 2868 ft.

ILLINOIS WILDCAT COMPLETIONS

Bond County: Failure—Mark Twain Oil Co.'s Storey 1, sw sw sw 34-6n-2w, abnd 1118 ft.

Clay County: Failure—J. R. Benson et al's Minnick et al 1, ne sw ne nw 33-3n-7e, abnd 3088 ft.

Edwards County: Failure—Central Pipe Line's Tarpley 1, nw ne nw 31-1n-14w, abnd 3220 ft.

Edwards County: New Field—C. S. Steele's Couch 1, w of sw se se 6-1s-11e, McC 3254-61 ft, 10 bbls, 3261 ft.

Effingham County: Failures—Homer Luttrell et al's Keller-Krohn 1, sw nw 11-6n-5e, abnd 2530 ft.

W. A. Rehfield's Beirman 1, ce½ se nw 17-7n-7e, abnd 2746 ft.

Fayette County: Failure—Troop & Larson's Larimore 1, ne se ne 25-9n-3e, abnd 1737 ft.

Franklin County: New Field—J. W. Menhall's Old Ben Coal 1, nw ne nw 25-5s-1e, AV 2690-2708 ft, 50 bbls, 2882 ft.

Franklin County: Failure—E. S. Adkins' Morey M1, se sw nw 34-7s-3e, abnd 3189 ft.

Gallatin County: Failure—B. A. Murrelle's Fitzgibbons 1, sw sw sw 24-10s-9e, abnd 2037 ft.

Hamilton County: Failures—Texas Co.'s Epperson 1, se se 9-4s-7e, abnd 3512 ft.

B. M. Heath et al's Diemm 1, ne se 35-5s-7e, abnd 3487 ft.

Jefferson County: Failure—Arrow Drlg. et al's Wimberley 1, se nw 22-1s-3e, abnd 2827 ft.

Monroe County: Failure—F. C. Yingling et al's Perkins 1-A, 100 ft e of sw sw sw 2-3s-10e, abnd 1972 ft.

Perry County: Failures—Stevens & Ward's Albers 1, sw se se se 32-4s-2w, wildcat deepened, otd 830 ft, abnd 1446 ft.

Texas Co.'s Malinski 1, se se se 1-5s-2w, abnd 3087 ft.

Washington County: Failure—C. V. Richardson et al's Glazik et al 1, cs½ sw sw 26-3s-2w, abnd 1572 ft.

Wayne County: Failures—Ralph Halbert et al's Ward 1, se ne 15-1n-5w, abnd 3102 ft.

J. W. Carter et al's Fartheree 1, ne sw ne 31-2n-5e, abnd 3145 ft.

ILLINOIS WILDCAT STARTS

Clay County—Ohio's Moscher 1, nw nw ne 11-5n-7e, lcn.

Crawford County—C. M. Page's Dennis 1, sw ne se sw 2-6n-13w, drilling deeper.

Cumberland County—Craft et al's Imle 1, ne sw 7-10n-11e, dr.

Edwards County—Deep Rock's Madden 1, nw nw ne 35-1n-10e, lcn.

Effingham County—Ohio's Vogt 1, sw ne ne 1-7n-5e, lcn.

Fayette County—Sinclair-Wyoming's Murray 1, ne ne ne 31-4n-1w, lcn.

Franklin County—J. W. Menhall's Valier Coal Co. 2, ne ne se 7-6s-2e, dr.

Seaboard's Old Ben 1, se se ne 30-7s-4e, lcn.

U. S. Drilling Operations in Week Ended June 27, 1942

STATE	ALL WELLS COMPLETED — THIS WEEK Total	Oil	Gas	Dry	*Miscel.	Total 1942	Total this Date 1941	‡WILDCATS COMPLETED — THIS WEEK Total	Oil	Gas	Dry	Distillate	Total 1942
Alabama	.....	.....	.....	.....	.....	3	1	.....	.....	.....	.....	.....	3
Arkansas	.....	.....	.....	.....	.....	66	80	.....	.....	.....	.....	.....	7
California	14	11	.....	3	.....	352	533	3	.....	.....	3	.....	15
Colorado	.....	.....	.....	.....	.....	5	8	.....	.....	.....	.....	.....	.....
Georgia	.....	.....	.....	.....	.....	2	1	.....	.....	.....	.....	.....	2
Illinois	46	22	.....	22	2	891	1,658	19	2	.....	17	.....	258
Indiana	7	1	.....	6	.....	194	250	1	.....	.....	1	.....	32
Iowa	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
Kansas	39	26	1	12	.....	792	1,043	8	2	.....	6	.....	179
Kentucky	8	1	.....	7	.....	72	146	5	1	.....	4	.....	14
Louisiana	10	7	1	2	.....	516	670	.....	.....	.....	.....	.....	73
Michigan	25	11	3	11	.....	343	387	8	1	.....	7	.....	86
Mississippi	.....	.....	.....	.....	.....	65	86	.....	.....	.....	.....	.....	18
Missouri	.....	.....	.....	.....	.....	15	32	.....	.....	.....	.....	.....	.....
Montana	5	4	.....	1	.....	84	98	.....	.....	.....	.....	.....	.....
Nebraska	.....	.....	.....	.....	.....	25	41	.....	.....	.....	.....	.....	11
New Mexico	12	11	.....	1	.....	204	168	1	.....	.....	1	.....	13
New York	26	14	.....	.....	12	572	391	.....	.....	.....	.....	.....	1
Ohio	22	7	10	5	.....	539	787	.....	.....	.....	.....	.....	.....
Oklahoma	22	9	2	11	.....	756	1,015	8	1	.....	7	.....	144
Pennsylvania	43	38	5	.....	.....	1,472	1,913	.....	.....	.....	.....	.....	.....
Tennessee	.....	.....	.....	.....	.....	2	9	.....	.....	.....	.....	.....	.....
Texas	95	51	4	29	11	3,168	4,745	30	6	1	22	1	554
Virginia	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
West Virginia	12	.....	9	2	1	349	323	.....	.....	.....	.....	.....	.....
Wyoming	2	2	.....	.....	.....	37	56	.....	.....	.....	.....	.....	2
Total this week	388	215	35	112	26	10,525	14,443	83	13	1	68	1	1,412
Total last week	347	190	40	84	33	10,137	13,769	53	9	2	42	.....	1,329
Total this year	10,525	6,045	848	2,684	948	.....	.....	1,412	179	18	1,208	7	.....

* Includes old wells deepened, water intake, gas input, salt water disposal, and distillate wells.
‡ OPC program calls for 4,000 wildcats in 1942, of which 624 should produce oil and 116 gas, leaving 3,260 dry.

Jefferson County—Oil Carriers Inc.'s Starr Bros. 1, cn½ sw sw 1-3s-4e, lcn.

R. B. Martin's Threlkeld et al 1, sw sw ne 10-4s-2e, dr.

LaSalle County—A. S. Feltus' Clark 1, nw ne se 18-32n-3e, dr.

Marion County—Nat'l Pet. Co.'s Crawford 1, ce¼ nw se 15-4n-1e, dr.

Putnam County—C. O. Weir's Kunne 1, ne sw nw nw 3-31n-1w, lcn.

Saline County—Sinclair-Wyoming's Garner 1, cw½ sw nw 26-7s-7e, dr.

St. Clair County—L. L. Benoist's Whittenfield 1, se nw ne 7-2n-7w, dr.

INDIANA FIELD COMPLETIONS

Daviess County—J. W. Cannon's Hunter 1, ne nw se 6-2n-5w, abnd 879 ft.

Gibson County—Mo-Jo Oil Co.'s Mason-Kennedy 1, nw ne sw 35-2s-9w, Penna 1128-35 ft, 20 bbls, 1136½ ft.

M. T. Schick's Mason 1, ne se 35-2s-9w, abnd 1550 ft.

Kingwood Oil's Phillips 1, ne sw se se 98-1n-10w, abnd 1936 ft.

Spencer County—Vickers & Batten's Freshly 1, 190 ft e of sw se ne 28-6s-5w, abnd 1005 ft.

H. & S. Drlg. Co.'s Eble 1-A, 243 ft e of se nw nw 7-7s-7w, abnd 1062 ft.

INDIANA WILDCAT COMPLETION

Knox County: Failure—J. E. Bauer's Ritter 1, nw nw nw sw 35-3n-10w, abnd 1922 ft.

KENTUCKY FIELD COMPLETIONS

Hancock County—Vickers et al's Cain 1 (4), 8-O-33, abnd 483 ft.

Henderson County—Snowden & McSweeney's Chase 2 (3), 11-Q-26, abnd 2027 ft.

Farmer & Chenault's Chase 2 (4), 12-Q-26, abnd 1995 ft.

KENTUCKY WILDCAT COMPLETIONS

Breckenridge County: Failure—Hatfield et al's Petty 1, 25-N-35, abnd 273 ft.

Daviess County: Failure—Andrew Teller's Hagan 1, 21-Q-37, abnd 1932 ft.

Muhlenberg County: Failure—C. D. Lambert's Jones 1, 23-H-28, wildcat deepened from 1273 ft, abnd 1307 ft.

Ohio County: Failure—J. C. Ellis' Schockley 1, 25-M-30, abnd 1664 ft.

Union County: New Field—Whatley & Lindas' Kington Coal 1, 1-O-19, Walts 1774-89 ft, 151 bbls, 1789 ft.

Kansas

South Lindsborg Offset Showing in Viola Lime

Ellis County Reagan sand test incomplete; west offset to South Lindsborg discovery shows in Viola lime.

Ellis County: Bay Petroleum Co.'s Penny 1, a semi-wildcat, SE SW SW 18-15-19w, ¾-mi east of Penny-Wann pool, drilled plugs in top of Reagan sand and partially filled with drilling mud, water and oil, with very little gas; to drill deeper.

McPherson County: Dickey Oil Co.'s Lander 1, ¼-mi west offset to discovery of South Lindsborg pool, CWL NE NW 19-17-3w, drilled Viola lime to 3372 ft after topping at 2269 ft. Casing has been landed for test of saturation.

KANSAS FIELD COMPLETIONS

Barton County: NE Kraft-Prusa—J. J. Lynn's Smith 2, cs½ se sw 36-16s-11w, Arb 3357½-60 ft, 4000 gals acid, pump 300 bbls, 3386 ft.

Barton County: SE Kraft-Prusa—Auto Ordnance's Disque B1, nw sw nw 23-17s-11w, Arb 3283 ft, 3000 bbls, 3296 ft.

Barton County: Bloomer—W. M. Bartlett's Staatz' 1, csw sw 24-17s-11w, Arb 3299 ft, abnd 3344 ft.

Barton County: Ainsworth—Continental's Underwood 3, nw sw ne 10-17s-13w, Lansing 3121 ft, 1000 gals acid, 338 bbls, pb 3342 ft, td 3368 ft.

Butler County: Potwin—Bennett & Abels' Maxwell 1, se nw nw 31-24s-4e, Miss 2652 ft, 1000 gals acid, pump 40 bbls, 2667 ft.

Butler County: Eldorado—Cities Service's Wilson 215, 100 ft s of ne se ne 7-25s-5e, Kansas City 1979 ft, 2000 gals acid, 40 bbls oil, 35 water, 2046 ft.

Cities Service's Wilson 216, ne sw sw 8-25s-5e, KC 1998 ft, 1000 gals acid, pump 4 bbls oil, 25 wtr, 2010 ft.

Butler County: Burgess—Adair-Morton's Thomas B3, sw ne se 10-28s-7e, KC 2045 ft, Miss 2800 ft, small show 2800-05 ft, abnd 2826 ft.

Cowley County: Deichman—Trees Oil's Franks Est. 1, se ne se 23-31s-4e, Bartles 2822 ft, shot 60 qts, flow 937 bbls, 2894 ft.

Cowley County: Geuda Springs—Adkins & Oliphant's Jennings 1, cse nw 8-33s-3e, Simpson 3482-3514 ft, abnd 3514 ft.

Ellis County: Bemis—Champlin's Hadley K1, ce½ se nw 29-11s-17w, Arb 3493 ft, 2000 gals acid, swab 304 bbls, 3524 ft.

Ellsworth County: Bloomer—Skelly's Moran 10A, cn½ ne se 31-17s-10w, Arb 3230-32 ft, 3000 gals acid, 2899 bbls, 3244 ft.

Jefferson County: McLouth—Hatcher & Fisk's Edmonds 1, csw se 16-9s-20e, McLouth sand 1388 ft, test 5 gas, 1399 ft.

Hatcher & Fisk's Kimmel 1, csw nw 30-9s-20e, broken sand 1523-30 ft, abnd 1530 ft.

Hatcher & Fisk's Kell 1, cne se 33-9s-20e, Miss 1430 ft, abnd 1448 ft.

Phillips County: Ray—Cities Service's States 1, sw se se 30-5s-20w, Reagan 3645 ft, 1982 bbls, 3645 ft.

Pratt County: Cunningham—Skelly's Stephens C5, se nw se se 35-27s-11w, Lansing 3513 ft, abnd 3544 ft.

Reno County: Hendrickson—Transwestern's Ramsey 2, sw se sw 36-22s-10w, Viola 3680 ft, 3000 bbls, 3704 ft.

Cities Service's Hinshaw A1, c nw se 2-23s-10w, Viola 3711 ft, 5000 gals acid, shot 15 qts, 1041 bbls, 3738 ft.

Cities Service's Hinshaw A3, cne se 2-23s-10w, Viola 3728 ft, ran 22 ft of 4-in liner at 3730 ft, 500 gals acid, 206 bbls oil and 15 bbls water, 3745 ft.

Reno County: NE Peace Creek—Leader Oil's Tonn 7, sw se se 11-23s-10w, Viola 3745 ft, 500 gals acid, 3000 bbls, 3755½ ft.

Cities Service's Heylmun B1, sw sw nw 12-23s-10w, Viola 3750 ft, 500 gals acid, 3000 bbls, 3760 ft.

Lion Oil & Refg.'s Weideroder 2, sw sw sw 12-23s-10w, Viola 3751 ft, 1000 gals acid, 3000 bbls, 3759 ft.

Reno County: Peace Creek—Cities Service's Sentney 2, ne ne 14-23s-10w, Viola 3749 ft, 1000 gals acid, 3000 bbls, 3765 ft.

Cities Service's Heylmun 4, sw sw se 15-23s-10w, Viola 3770 ft, 3000 bbls, 3777 ft.

Rice County: Smyres—Transwestern's Hill 1, nw se 36-19s-6w, Miss 3351 ft, pump 467 bbls, 3372 ft.

Rice County: Keesling—Cities Service's Young 3, cne se 8-20s-9w, Arb 3261 ft, 500 gals acid, pump 340 bbls, 3270 ft.

Russell County: West Trapp—Pryor & Lockhart's Boxberger B1, cs½ ne se 10-15s-14w, Arb 3220-31 ft, 500 gals acid, pump 36 bbls, 3231 ft.

Stafford County: Beford—Stanolind's Allen B2, nw sw sw 27-23s-12w, Arb 3840 ft, 1500 gals acid, 1249 bbls, 3846 ft.

British American's Meyer 7, ne ne 28-23s-12w, Arb 3827 ft, 500 gals acid, 3000 bbls, 3836 ft.

Stafford County: Leesburgh—Continental & Cities Service's McCune 2, se nw ne 12-25s-13w, Arb 4116 ft, 3000 bbls, 4128 ft.

KANSAS WILDCAT COMPLETIONS

Barton County: New Field—Helmerich & Payne's Merten 1, nw nw ne 10-19s-15w, Anhy 906 ft, Topeka 2925 ft, Lansing 3257 ft, Congl 3510 ft, LaMotte 3551 ft, show oil odor gas 3551-54 ft, show oil and water 3554-58 ft, 5-in 3555 ft, shot 10 qts, 3559-65 ft, 168 bbls, 3578¼ ft.

Cowley County: Failure—Continental's McKnab 1, sw sw ne 31-30s-5e, Bartles 2865-75 ft, Miss 2925 ft, Arb 3377-88 ft, abnd 3391 ft.

Edwards County: Failure—Stanolind's Boyd 1, sw sw se 1-23s-19w, Anhy 1283 ft, Dodge 3840 ft, Lansing 3871 ft, cored 3977-87 ft, Base KC 3175 ft, Congl 4408 ft, Viola 4765 ft, Rew Arb 4941 ft, Arb 4971 ft, abnd 5035 ft.

Ellis County: Failure—A. H. Witt's Fee 1, cn½ ne ne 29-14s-19w, Anhy 1450 ft, Lansing 3466 ft, Base KC 3725 ft, Marmaton 3747 ft, Congl 3769 ft, Arb 3781-87 ft, abnd 3787 ft.

Greenwood County: New Field—LeBlanc's Shell 1, c nw sw 28-27s-12e, base KC 1040 ft, Oswego 1255 ft, Miss 1640 ft, show oil 1645-48 ft, cem 4-in 1645 ft, 2000 gals acid, 10 bbls, 1649 ft.

Kingman County: Failure—Booth & Absher's Beshore 1, ce½ se sw 29-28s-5w, Topeka 2475 ft, base Oread 2840 ft, Lansing 3045 ft, base KC 3745 ft, Miss 3893 ft, base Miss 4167 ft, Viola 4291 ft, Simpson 4311-32 ft, abnd 4332 ft.

McPherson County: Failure—W. C. McBride's Hanson Est. 1, cs½ se nw 10-17s-1w, Miss 2772 ft, abnd 2733 ft.

Russell County: Failure—Hartman & Blair's Boxberger 1, sw sw ne 4-14s-14w, Anhy 835 ft, Topeka 2720 ft, Lansing 3000 ft, Gorham 3275 ft, Arb 3287-91 ft, abnd 3291 ft.

KANSAS WILDCAT STARTS

Barton County—Falcon Seaboard et al's Sowards 1, cn½ nw sw 1-20s-14w, lcn.

Butler County—W. N. Bartlett et al's Wilhite 1, sw ne nw 21-27s-7e, lcn.

Max Cohen et al's Price 1, cs½ se se 8-29s-6e, dr.

Ellsworth County—Falcon Seaboard et al's Bruning 1, ne ne se 9-15s-9w, rig.

Harvey County—Atlantic et al's Williams 1, se se se 30-24s-2w, lcn.

Lincoln County—Churchill Oil's Griffin 1, c ne ne 25-8s-10w, shut down.

Marion County—F. A. Gillespie & Hauser's Pritz 1, se se sw 29-18s-5e, dr.

Phillips County—Carter's Shaw 1, nw nw 23-3s-18w, lcn.

Pottawatomie County—C. O. LaShielle's Umschied 1, nw nw 16-9s-9e, shut down.

Reno County—H & P Wishy 1, ne ne ne 18-22s-9w, survey.

Sherman County—Sinclair Prairie's Mercer 1, ne ne nw 28-10s-40w, lcn.

Stafford County—W. P. Faulkner et al's Ward 1, se sw 21-21s-13w, dr.

Fair Drlg.'s Stroble 1, ne ne sw 9-22s-14w, dr.

J. J. Lynn et al's Wendelburg 1, cs½ nw ne 19-23s-11w, rig.

Trego County—Darby Pet.'s Findlay 1, se nw nw 23-11s-21w, survey.

Wallace County—Sinclair Prairie's Wallace Investment Co. 1, cs½ se se 22-11s-39w, lcn.

Oklahoma

Pauls Valley Field Being Defined

Pauls Valley being defined; Layton sand looks good for production; Cromwell shows saturation in Seminole; Hunton pays off on Langston flank and in Pottawatomie.

Garvin County: Pure's Teter 5, SE NE SW 36-4n-1w, west edge of production in Pauls Valley field is waiting on orders after testing salt water at 4526 ft, then again showing salt water after plugging back to 4350 ft. Teter 6, SE SW SW 31-4n-1e, south end of production, abnd after testing salt water at 4329 ft.

Pawnee County: W. C. McBride's Gilbert 1, SE NE SW 19-23-3e, northeast of North Watchorn pool, ripped casing in Layton sand at 2774-87 ft and is showing oil after testing Wilcox sand dry.

Alma Oil Co.'s Swallow 1, SW NE NE 26-23-3e, northwest of the East Watchorn pool discovery, is drilling saturated Wilcox topped at 3895 ft.

Seminole County: McIntyre, Cummins et al's Osborne 1, a wildcat, NEc SE 11-61-6e, is drilling saturated Cromwell sand, 2720-2740 ft.

Pottawatomie County: Atlantic's Hamil 1, C NE SW 27-8-3e, perforated Hunton lime at 2640-2795 ft, and appears as a new Hunton well after finding Wilcox sand dry.

Logan County: Anderson-Pritchard Oil Co.'s Leachman 1, is a small producer from Hunton lime on the edge of Langston field at NE SE NW 14-17-1w. Well adds minor acreage to productive area.

OKLAHOMA FIELD COMPLETIONS

Creek County: Glenn—Sinclair Prairie's Berryhill 23, nw nw se 16-17n-12e, Glenn 1410-1518 ft, shot 20 qts, 1 bbl, 1582 ft.

Creek County: Cushing—J. E. Crosbie's Dailey 1, se ne nw 12-18n-7e, Skinner 2648-72 ft, shot 100 qts, pump 25 bbls oil and 7 bbls wtr, 2672 ft.

Creek County: Keystone—Black Jack Oil's Isles 2, se sw ne 1-19n-9e, Red Fork 1984 ft, shot 110 qts, pump 7 bbls, 2010 ft.

Hughes County: West Holdenville—M. W. Lee's Culver 1A, ne ne ne 11-7n-8e, sand 1022 ft, shot 7½ qts, 1.5 gas, 1044 ft.

Logan County: West Navina—Cities Service's Cavanaugh 1, sw sw sw 2-15n-4w, Layton 5047 ft, flow 316 bbls, 5077 ft.

Okfuskee County: Weleetka—Winona's Fier 1A, se ne sw 16-10n-11e, 2nd Cromwell 3006-15 ft, pay 3022-29 ft, pump 14 bbls oil, 40 bbls wtr, 3038 ft.

Osage County: Hominy—Finance Oil Co.'s 33, se nw nw 32-23n-9e, Bartlesville 2095 ft, abnd 2249 ft.

Pawnee County: Cleveland—Sinclair-Prairie's Jones 39, cwl nw se nw 20-21n-8e, Bartlesville 2267 ft, pump 151 bbls oil, 30 bbls wtr, 2350 ft.

Pontotoc County: Jesse County—L. S. Dennis' McCarty 2A, nw ne nw 12-1n-7e, broken sand 1323 ft, odor 1323-26 ft, abnd 1403 ft.

Pottawatomie County: St. Louis—Atlantic's Burke 6, 25 ft e of ne ne 16-7n-4e, Earlsboro 3512 ft, shot 75 qts at 3515-30 ft, flow 15 bbls, 3551 ft.

Pottawatomie County: St. Louis East—Kerlyn et al's Martin 1, nw ne se 8-7n-5e, 2nd Wilcox 4320 ft, abnd 4323 ft.

Pottawatomie County: Hotulke—Coronada Oil Co.'s Bowling 1, se nw 25-9n-4e, Hunton 4138 ft, abnd 4156 ft.

H. L. Berkey's Pack 1, se se sw 26-9n-4e,

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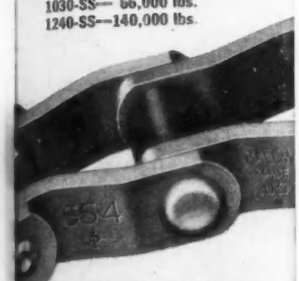

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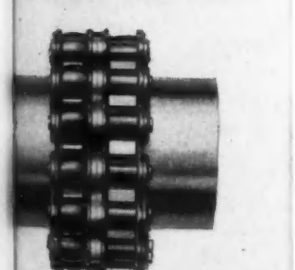

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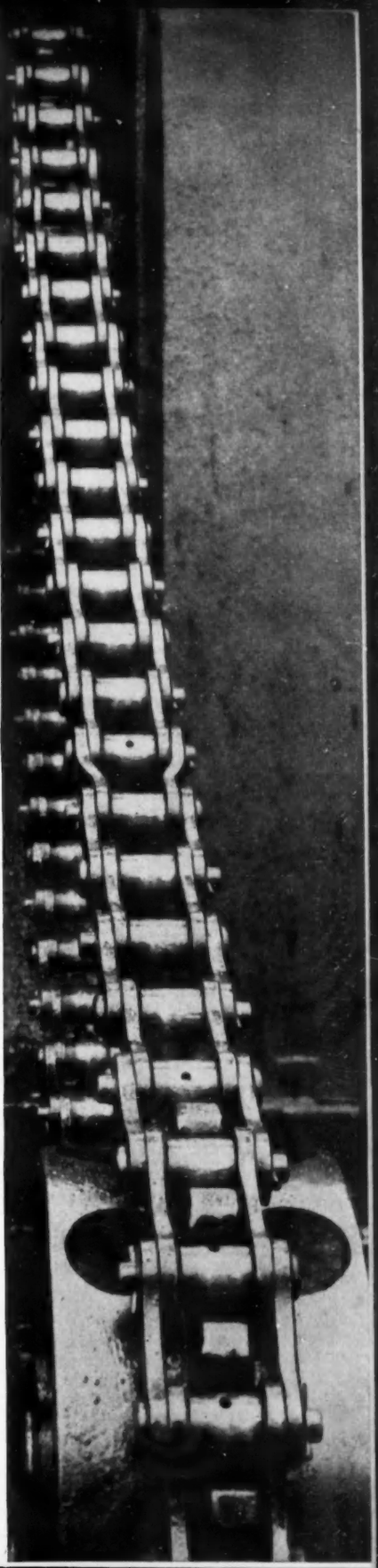

BALDWIN CHAINS TRANSMIT ALL THE POWER

Viola 4349 ft, 5000 gals acid, pump 5 bbls, 4411 ft.

Tulsa County: Bowden—A. D. Whitten's Jack 1, nw sw se 8-18n-12e, Big Lime 651-63 ft, 1.5 gas, 663 ft.

OKLAHOMA WILDCAT COMPLETIONS

Hughes County: Failure—Phillips' Townsend 1, nw ne sw 17-7n-11e, Atoka 2930 ft, Gilc 3323 ft, Wapa 3955 ft, Union Valley 4192 ft, Crom 4230 ft, Fayetteville 4600 ft, Miss Caney 4730 ft, Mayes 4950 ft, Wood 5085 ft, Hunton 5203 ft, Syl 5215 ft, Viola 5312 ft, Dense 5373 ft, Dolo 5390 ft, 1st Wx 5430 ft, 2nd Wx 5480 ft, abnd 5524 ft.

Kiowa County: Failure—Bud Lewis' James 1, c sw sw ne 29-7n-17w, limestone 1129-31 ft, water 1140-45 ft, Syl shale 1150 ft, abnd 1163 ft.

Lincoln County: Failure—Wilcox O&G's Kolar 1, sw sw sw 5-12n-6e, hogs 1985 ft, Ceb 2340 ft, Osw 3170-80 and 3240-50 ft, Prue 3250 ft, Skinner 3397 ft, Inola 3750 ft, Brn lm 3840 ft, Mayes 4105 ft, Wood 4321 ft, Hunton 4357 ft, Syl 4440 ft, Viola 4530 ft, Dense 4571 ft, Dolo 4572 ft, 1st Wx 4597 ft, 2nd Wx 4632 ft, abnd 4647 ft.

Logan County: Failure—Kubat et al's School 1, se ne sw 16-17n-1w, Osw 4657 ft, Base Penn & Wood 5050 ft, Mise 5083 ft, Hunton 5103 ft, Syl 5140 ft, Viola 5229 ft, Dense 5266 ft, 1st Wx 5327 ft, abnd 5504 ft.

Payne County: Failure—Keener & Deep Rock's Boye 1, nw nw ne 27-19n-6e, Ceb 2260 ft, Osw 2643 ft, Skinner 2917-22 ft, 2nd Wx 3467 ft, abnd 3477 ft.

Pontotoc County: Failure—Selby et al's Busby 1, nw ne nw 18-4n-5e, Belle City 590 ft, Viola Ferndale 1525 ft, Trenton 1595 ft, Dolomitic lime 1874-97 ft, abnd 2003 ft.

Pottawatomie County: Failure—Continental's Hallum 1, sw nw ne 6-8n-5e, Penn shale 3723 ft, Mayes 3948 ft, Wood 4010 ft, Mise 4098 ft, Hunton 4107 ft, Syl 4155 ft, Viola 4256 ft, Dense 4297 ft, Dolo 4340 ft, Wx 4402-21 ft, abnd 4421 ft.

Seminole County: New Field—Kerlyn's Trapp 1, ne se ne 7-8n-7e, Senora lm 1585 ft, Calvin 2110 ft, 1st Senora 2505 ft, 2nd Senora 2540 ft, Booch 3290 ft, Dutcher 3358 ft, Mayes 3850 ft, Wood 3940 ft, Hunton Chert 4004 ft, Hunton 4007 ft, Syl 4075 ft, Viola 4163 ft, Dense 4200 ft, Dolo 4216 ft, Wx 4242 ft, 6-in 3440 ft to test show oil 3358-90 ft in Dutcher, pb 3422 ft, shot 90 qts, 3352-78 ft, flow 10 bbls oil and 10 bbls water, 4369 ft.

OKLAHOMA WILDCAT STARTS

Comanche County—Sinclair-Prairie's Austin 1, nw sw sw 6-2n-9w, lcn.

Haskell County—Leflore Co.'s Wallace 1, c ne 6-8n-21e, rig.

Lincoln County—D. B. Malernee's Trawick 1, se se sw 25-16n-5e, lcn.

Pottawatomie County—Newt Barett, Inc.'s Bledsoe 1, cs½ sw nw 3-6n-4e, lcn.

Seminole County—McIntyre et al's Osborne 1, ne ne se 11-6n-6e, dr.

Nebraska

Dawson Well Looks Good After Plug Back

Second Viola well still not tested; another Hunton producer for Dawson; second wildcat starts on Missouri side.

Richardson County: Skelly's Smith 1, C E½ SE SE 3-1n-14e, Dawson well with saturation in Viola lime, is recementing for test of this formation. In the same field Brown and Clampitt's Cornelius 1, C E½ SE NE 4-1n-14e, looks good in the Hunton after plugging back from a fishing job.

Missouri: Wm. Peppas' Miller 1, SE SE SE 8-53-28w, Ray County, is a wildcat spudded to 118 ft to test Arbuckle lime, expected to be topped about 1380 ft.

NEW MEXICO COMPLETIONS

Eddy County—W. D. Cunningham et al's State 1, se nw sw 36-17s-27e, pump 100 bbls oil, 25 bbls water, lime 452-498 ft.

Mizel & Randall's Friess 1, ne nw se 19-17s-31e, swab 18 bbls, 3% bs&w, acid 4500 gals and shot 200 qts 2807-67 ft, td 3521 ft, pb to 2870 ft.

Patton Bros. et al's Sargent 1, c se ne 27-17s-30e, flow 102 bbls 14/64-in, shot 100 qts 3191-3233 ft.

Sanders Bros. et al's Etz 1-E, c sw ne 34-16s-30e, flow 230 bbls 2-in, shot 240 qts 2900-85 ft.

Neil H. Wills et al's Keyes 5-C, ne sw nw 15-20s-30e, pump 185 bbls, 30% bs&w, 1578-84 ft, td 1641 ft.

Lea County: Arrowhead—Gulf's State-Ramsey 12, c sw sw 35-21s-36e, flow 31 bbls, ½-in, acid 2500 gals, 3800-65 ft.

McKinley County—Petroleum Products Corp.'s State-Wilson 19, c sw se 36-18n-9w, pump 14 bbls, 1586-1630 ft, td 1632 ft.

Petroleum Products' Santa Fe 20, ne nw ne 1-17s-9w, flow 38 bbls 1553-87 ft.

Petroleum Products' Santa Fe 25, ne sw se 36-18n-9w, pump 51 bbls 1621-46 ft.

Petroleum Products' Santa Fe 27, nw nw nw 36-18n-9w, pump 42 bbls 1611-30 ft.

Petroleum Products' Santa Fe 28, nw se 36-18n-9w, pump 156 bbls 1729-33 ft.

NEW MEXICO WILDCAT COMPLETION

Gordon M. Cone-Brown-Coll's Hare 1, nw nw ne 14-16s-28e, elev 3558 ft, top red sand 1190 ft, Nolen sand 1320-1400 ft, abnd 2640 ft.

NEW MEXICO WILDCAT START

Eddy County—Continental's State 1-36, c se nw 36-19s-30e, lcn.

West Texas

Pecos Cambrian Well Makes High-Gravity Oil

Four new operations assigned University district, Andrews County, while two completions West Andrews sector forestalled lease expirations. State's first Cambrian production involves high-gravity oil.

Andrews County: Atlantic's University 1-A, ½-mile southeast its West Andrews pool discovery, flowed 188 bbls 38.3-gr oil 5-5/6 hours for completion after nitro shot 4280-4420 ft, td 4430 ft. Phillips' University-Andrews 8, north offset southern-most pumper in same pool, also forestalled June lease expiration in pumping 48 bbls initial, acidized 4269-4460 ft. Latter added 3 more tests, making total 13 pending operations to try for Permian, or Ellenburger production. Kewanee Oil Co. joined the list of active participants the past week. Humble's Sims 1, Northwestern Andrews County wildcat, drilling dry lime 7860 ft, and Atlantic et al's University-Texu 1-A, projected Ordovician test, drilling dry lime 6040 ft. Both missed the Clear Fork pay.

Pecos County: Gulf and L. H. Wentz' Millar 3, northwest offset their Ellenburger producer in Wentz pool, pumped 132 bbls 38.8-gr pipe line oil, gas/oil ratio 227/1, shot Cambrian 4378-92 ft, schist 4392-4406 ft. Millar 3 failed to produce in Ellenburger 4167-4378 ft, elevation 2544 ft, and is first Cambrian producer for state.

Lamb County: Stanolind's Hopping 1, ½-mile southeast Fieldton, drilling dry dolomite 9480 ft in Ellenburger, topped 9440 ft, elev 3561 ft. This wildcat established steep dip in formations immediately north of granite ridge that cuts across the north portion of Permian Basin in logging Permian-Mississippi contact at 9040 ft, being 2125 ft low to granite failure in southeast Hale County.

Lubbock County: Stanolind's Stinnett 1, 10 miles east of Lubbock, installing pumping unit, showed for 50 to 100 bbls oil daily, with considerable cut oil on swabbing tests after acidizing 12,000 gals, Clear Fork perf 4690-4767 ft, plugged back from 7000 ft. J. R. Sharp has taken over Harrison et al's Nairn 1, Lubbock County's single producer, to re-condition hole and reacidize Clear Fork saturation 4870-5002 ft.

Big Wells: Gulf et al's Tubb 6-B, east extension for south portion Sand Hills field, rated 8711 bbls 38.4-gr oil, gas/oil ratio 2754/1, open flow, acidized Ellenburger 5647-72 ft. Gulf's Waddell 54, southwest outpost Gulf-Waddell field, potential 11,142 bbls 35.6-gr, gas/oil ratio 343/1, acidized 3480-95 ft.

WEST TEXAS COMPLETIONS

Andrews County: West Andrews—Atlantic's University 1-A, c se nw sec 12, blk 11, elev 3298 ft, flow 768 bbls 38-gr, 2-in, shot 540 qts 4280-4420 ft, td 4430 ft.

Phillips' University-Andrews 8, c se se sec 14, blk 11, pump 48 bbls oil, 5½ bbls water, acid 1000 gals 4269-4450 ft, td 4460 ft.

Crane County: Dune—Magnolia's University 1-21, c ne se sec 21, blk 30, pump 25 bbls oil, 19 bbls water, natural, 3105-83 ft, td 3205 ft.

Crane County: Sand Hills Ellenburger—Gulf et al's Tubb 6-B, c sw se PSL 28, blk B-27, flow 8711 bbls cas, acid 5000 gals 5613-72 ft.

Crockett County: Clara Couch—J. H. Elder et al's Couch 1-A, c ne ne HE&WT 37, blk GG, abnd 2252 ft.

Gaines County: Cedar Lake—Stanolind's Hall 3, c se ne D&W 8, blk H, swab 318 bbls, shot 300 qts 4615-4730 ft, td 4750 ft.

Gaines County: Seminole—Mabee O&G Co.'s Austin 1, c nw nw WT 190, blk G, flow 347 bbls, ½-in, natural 5130-5240 ft.

Hockley County: Slaughter—Honolulu's Mallet 20-A, nwc lab 20, leag 52, Scurry CSL, flow 650 bbls, 2½-in, acid 8000 gals 4968-5006 ft, td 5023 ft.

Honolulu's Mallet 23-A, sec lab 4, leag 52, Scurry CSL, flow 914 bbls, 2½-in, acid 7000 gals 5014-28 ft.

Honolulu's Slaughter 37-B, swc lab 49, leag 37, Zavalla CSL, flow 1510 bbls, 2½-in, acid 10,000 gals 4910-95 ft.

Geo. P. Livermore's Owens 1, nwc lab 98, leag 38, Zavalla CSL, flow 149 bbls, 36.3% bs&w, acid 13,000 gals 4984-5028 ft, td 5032 ft.

Howard County—Fleming Oil Co.'s Dodge 8, se se ne T&P 15, blk 30, T-1-S, pump 243 bbls, shot 745 qts 2680-2860 ft.

Mitchell County: Northwest—F. W. Merrick, Inc.'s Strain 3-B, 1650 ft from n and 330 ft from w G. Y. McWilliams sur, pump 88 bbls, shot 700 qts 1555-1726 ft, td 1743 ft.

Reagan County: Barnhart—R. R. Ogden-R. H. Hawn, M. H. Reed's University 2-A, c se ne sec 2, blk 48, flow 1686 bbls, ½-in, acid 10,000 gals Ellenburger 9086-9172 ft.

Ward County—Gulf's Hutchings 171, sw sw nw sec 10, blk O, flow 199 bbls, 2-in, shot 310 qts 2469-2555 ft.

Winkler County: Weiner—Westbrook Oil Corp.'s Brown-Altman (Gulf) 1-B, c se se PSL 25, blk B-5, 12,627,000 gas, natural, open cas, top pay 2356 ft, td 3193 ft, pb to 2996 ft.

WEST TEXAS WILDCAT COMPLETIONS

Borden County: Failure—Ed. McAdams and Geo. P. Livermore's Johnson 1, c sw ne T&P 35, blk 32, T-5-N, elev 2620 ft, anhydrite 1180 ft, lime 3100 ft, abnd 4970 ft.

Hockley County: Failure—Bruce McKague et al's Goodpasture 1, 467 ft from s and 750 ft from e lines lab 16, leag 17, Wichita CSL, elev 3475 ft, anhydrite 2182 ft, 1st brown lime 3720 ft, San Andres 4100 ft, abnd hfw 5190-5202 ft.

Reagan County: Failure—Argo Oil Corp.'s Nunn 1, c se sw L&SV 8, blk B, elev 2676 ft, anhydrite 1260 ft, Yates sand 2070 ft, lime 3260 ft, abnd sul w 3575-85 ft.

Reeves County: Failure—C. A. Kitsos, Geo. Scott et al's Burchard 1, 2173 ft from s and 467 ft from e PSL 7, blk 58, elev 3225 ft, Delaware lime 3504 ft, sand 3547 ft, abnd 3557 ft.

WEST TEXAS WILDCAT STARTS

Crane County—J. D. Bodkins et al's Slator-Humble 1, c sw nw T&P 16, blk 42, T-4-S, lcn.

Mitchell County—Cosden Pet. Corp.'s Griffin 1, c se ne T&P 26, blk 28, T-1-S, lcn.

Pecos County—Grapeland Oil Co.'s W. T. McKay 1, 330 ft from n and 4950 ft from e lines I&GN 33, blk 1, lcn.

North Texas

New Drilling Increased In Anticipation of Demand

Young County deep strike exploring oil zone to serve basis future development of block. Archer County prospect to continue to Ellenburger before attempting completion in Strawn. Volume of new drilling has exceeded completions by wide margin for some weeks in anticipation of greater demand for Mid-Continent grade crude for north-bound movement.

Young County: Shell's Bullock 1, recent discovery that tested 50 bbls oil hourly natural from Mississippian at 4748-4820 ft, logged additional saturation at intervals in deepening to 4971 ft, where production test is pending. Company is to explore the entire pay section before completing, as it has a large block of leases.

Archer County: Geo. Cooper et al's

Knight 1, between K-M-A and Hull-Silk deep areas, was drilling at 4345 ft to explore the Ellenburger after passing up probable commercial production in three zones of Strawn saturation, topped at 4110 ft.

Throckmorton County: British-American Oil Producing Co.'s McCluskey 1, projected Ellenburger wildcat on geophysical prospect 4 miles northwest of Throckmorton, drilling dry lime at 4685 ft, tester at 4615-39 ft in bend, topped 4556 ft, yielded 120 ft oil-cut mud.

Jack County: Paul Steed et al's Flowers 1, south offset to Worsham-Steed pool discovery, rated 20,000,000 gas with spray 5 to 10 bbls oil daily from Smithwick sand and conglomerate 4692-4716 ft, 16 ft high to Joe Worsham et al's 60-bbl pumper. Rotary used on above test has been moved to Worsham et al's Hensley 1, 2½ miles southwest above pool, to drill by 2 strings tools lost after well blew out with prolific oil and gas flow from Marble Falls 5295-97 ft. Hanlon & Buchanan's Griffin 1, 1½ miles southeast Hoefle pool, tested small amount oil and gas when unloaded at 4851-66 ft in Bend, topped 4845 ft, and will be deepened before acidizing.

NORTH TEXAS COMPLETIONS

Clay County: Akin—Dimock-Costley's Patrick 2-A, blk 82, Byers subdiv, pump 64 bbls, 1119-27 ft.

Clay County: Antelope—Shell's Henderson 22-C, 330 ft from n and 1220 ft from w lines TE&L 2605, top Mississippi 5698 ft, Ellenburger 6068 ft, flow 2292 bbls ½-in, acid 2000 gals Mississippi, perf 5740-95 ft, td 6086 ft.

Clay County: Nebtex—Bridwell Oil Co.'s Myers 3, 5040 ft from w and 5450 ft from s lines C. Thompson sur, Bend 5504 ft, Mississippi 6019 ft, Ellenburger 6048 ft, abnd 6067 ft.

Montague County: Stoneburg—Continental's Drummond 1, 22½-ac of w 80-ac of n½ sec 4, Limestone CSL, pump 94 bbls oil and 32 bbls water, Bend conglomerate 6216-36 ft.

Throckmorton County—Humble's Crump 1, 660 ft out nwc TE&L 956, top Bend 4022 ft, abnd 4056 ft.

Wichita County: K-M-A Ellenburger—E. C. Oil Co.'s Mangold 27-E, 609 ft from s and 467 ft from e blk 37, P. Castleman sur, flow 1781 bbls 2-in, acid 3000 gals 4248-4330 ft.

Texas Co.'s Thom 12, 2067 ft from w and 538 ft from n of s 219-ac, W. H. Spillers sur, flow 408 bbls 2-in, acid 3000 gals 4350-66 ft.

Young County—Rancho Oil Co.'s Nall 1, c nw se BS&F 1, abnd 4486 ft.

NORTH TEXAS GAS INPUT WELLS

Archer County—Phillips' Rogers-Pan 15, swc of e 80 of w 120-ac TE&L sec 1600, td 1288 ft.

Young County—Phillips' Larimore-Pan 51, TE&L 2246, td 714 ft.

Phillips' Larimore-Pan 52, TE&L 2246, td 725 ft.

Phillips' Larimore-Pan 53, TE&L 2246, td 706 ft.

Phillips' Larimore-Pan 54, TE&L 2246, td 720 ft.

Phillips' Larimore-Pan 55, TE&L 2246, td 707 ft.

NORTH TEXAS OLD WELLS DEEPENED

Wichita County: K-M-A—Tide Water Associated's Mangold 11, 1800 ft from s 200 ft from e blk 31, Castleman sur, otd 3740 ft, flow 1176 bbls ¾-in, shot 280 qts 3695-3784 ft.

Young County—Chas. E. Knox et al's Taylor 5-A, TE&L 3407, otd 3934 ft, pump 5 bbls, acid 2000 gals, td 4402 ft.

NORTH TEXAS WILDCAT COMPLETIONS

Montague County: Failures—Seitz-Comegys & Seitz's Graves 1, 330 ft out sec ne 246-ac tr, E. B. Wooten sur, top Hooser 1682 ft, abnd 2672 ft.

Seitz-Comegys & Seitz's Graves 2, 1093 ft from w and 670 ft from s of ne 246-ac tr, E. B. Wooten sur, abnd 1143 ft.

Throckmorton County: Failures—Butler-Horne Drlg. Co.'s Durham-Humble 2, 933 ft from n and 1433 ft from w TE&L sec 1627, abnd 545 ft.

Trumter Pet. Co.'s Davis 1, 835 ft from s and 980 ft from e blk 94, Comanche Indian Reserve, abnd 791 ft.

Young County: Failures—B. C. Gilmore et al's King 1, 582 ft from n and 936 ft from e of tract, L. W. Ross sur, abnd 553 ft.

B. C. Gilmore et al's McDavid 1, 1975 ft

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from e and 1050 ft from n S. Sallie sur A-252, abnd 600 ft.

Tex-Tor Oil Corp.-J. McLester's Hume 1, 660 ft from ne and se lines of nw¼ Ben Hill sur, Bend 3820 ft, Marble Falls 4265 ft, abnd 4312 ft.

NORTH TEXAS WILDCAT STARTS

Archer County—Sinclair Prairie's Hood 2, 3300 ft from n and 1400 ft from e lines ATNCL 18, lcn.

Fain-McGaha Oil Corp.'s Turbeville 1, 330 ft out nwc blk 45, Jefferson CSL sur, sp.

Fortex Oil Corp.'s Threet 1, 990 ft out sec of M. Pickens sur A-341, lcn.

Guy J. Scholl et al's Hyer 1, 851 ft from s and 1368 ft from w lines 166-ac tr, blks 87 and 89, Jefferson SCL sur, lcn.

Cooke County—Fred Snuggs et al's Lynch 1, 660 ft from n and 330 ft from e lines of W. C. Wharton sur A-1114, lcn.

Seitz-Comegys-Seitz's O'Neal 1, 330 ft out nec 80-ac tr, nw part A. Pope sur, A-818, lcn.

Grayson County—Sinclair Prairie's Freeman 1, 660 ft out nec BBB&C 149, lcn 8000-ft test.

Montague County—Sinclair Prairie's Eanes 1, 660 ft out swc G. A. Bench sur A-1521, lcn Ordovician test.

Continental's Ketchum 1, 990 ft from sw and 330 ft from nw lines sec 43, Hill CSL sur, 2 mi e Bowie, lcn 7600-ft test.

Wise County—Stanolind's Huddleston 1, c se se sec 9, Falls CSL sur, lcn 7000-ft test.

Young County—J. G. Darden et al's Stowe 1, 330 ft out nwc TE&L 228, lcn.

TEXAS PANHANDLE COMPLETIONS

Carson County—Skelly's Schafer 146, I&GN 189, blk 3, pump 498 bbls, shot 357 qts 3155-3220 ft.

Gray County—Magnolia's Fee (tr. 227) 51, I&GN 10, blk 3, pump 79 bbls, shot 240 qts 2970-3036 ft.

Hutchinson County—Phillips' Whittenburg 67, H&TC 71, blk 46, pump 52 bbls, acid 1500 gals 2722-38 ft, td 2751 ft.

Phillips' Whittenburg 69, sec 19, blk V, B. F. Jamieson sur, pump 129 bbls, shot 440 qts 2736-2849 ft.

Skelly's Merchant 2, H&TC 34, blk 47, pump 131 bbls, acid 3000 gals 2757-60 ft.

Moore County—Phillips' Donaldson 1, c ne T&NO 160, blk 3-T, 260,000,000 gas, acid 1000 gals 3145-70 ft, td 3180 ft.

Wheeler County—Butler-Nagle Oil Co.'s Johnson 1, sw ne ne H&GN 40, blk 24, pump 12 bbls, shot 120 qts 2215-2300 ft, td 2400 ft.

West Central Texas

Taylor County Wildcat Has Saturation in Lime

Northern Taylor County wildcat making production test of oil-saturated lime. Marble Falls production established in Donnell pool, Northern Stephens County. Semi-wildcat in Comanche County flows by heads.

Taylor County: Butler-Horne Drilling Co.'s Hudson 1, Lot 3, J. A. Nabors Survey, 1½ miles south of Wimberly pool, cemented 7-in 2412 ft to test oil saturation in lime 2408-15 ft.

Stephens County: Texas Pacific Coal & Oil Co.-Sinclair Prairie's Donnell 1-A, southwest offset to Donnell pool's Mississippi oil producer, installing casing pump, having swabbed 93 bbls oil and 297 bbls water daily, Marble Falls perf 3928-36 ft, plugged back from hole full water 4417-18 ft. Christie Bros. et al's Donnell 1, northeast offset to discovery, failed to make producer in above two zones, and showing small amount oil with water from Bend perf 3210-20 ft.

Comanche County: F. O. Akin et al's Bellamy 1, C W½ NE SE H&TC 12, Blk 2, 2/3-mile northwest production, flowed by heads after drilling casing plugs, saturated lime 2650-61 ft.

Jones County: Maracaibo Oil Exploration Corp.'s Church 1, northwest edge Wimberly pool, flowed 158 bbls 44-gr oil natural 3-hr gauge ¾-in choke, sandy-lime 2299-2315 ft, td 2327 ft, becoming largest in pool.

WEST CENTRAL TEXAS COMPLETIONS

Brown County—Central Texas Gas Co.'s Roberts 1, lot 3, Wm. K. Dalton sur 57, 6,160,000 gas, acid 7000 gals 1691-1741 ft, td 1868 ft.

W. M. Walker et al's Shields 1, lot 22, G. W. Pentecost sur 100, pump 5 bbls, acid 3000 gals 1224-66 ft.

Jones County—Phillips' Almquist-Pan 3, se ne se BBB&C 181, abnd 3368 ft.

Palo Pinto County—Reed & Kirk's Copeland 1, AB&M 1, abnd 3600 ft.

WEST CENTRAL TEXAS WILDCAT COMPLETIONS

Bosque County: Failure—C. F. Carter et al's Berry 1, 2369 ft from n and 1769 ft from e lines Hugh H. Calvert sur, abnd 720 ft.

Callahan County: Failure—Geo. Donnelly et al's Kennard 1, c se ne E. T. 9, elev 1873 ft, abnd 1427 ft.

Coleman County: Discovery—W. M. Holland-Gladys Huffman's Bailey 1, se ne sw HT&B 17, elev 1595 ft, Strawn (Gray) sand 2720 ft, Marble Falls 2720 ft, pump 170 bbls 41-gr oil, 30 bbls water, acid 8000 gals 2720-38 ft, td 2793 ft.

Coleman County: Failure—Eastland Oil Co.'s O'Hair 1, 3975 ft from n and 3490 ft from e lines Casper Simon sur, elev 1592 ft, Bend 2590 ft, Ellenburger 3302 ft, abnd 3384 ft.

East Texas

Wildcats in Hunt and Navarro Counties Produce

Producing wildcats recorded along Mexia-Talco fault trend in Hunt and Navarro counties. Smackover lime project in Hunt County abandoned. Wood County's new pool has 5 active tests.

Hunt County: Hollandsworth Drilling Co. et al's Baker 1, NWc of 100-acre lease, John Warren Survey A-1116, Club Lake area and 7 miles southeast Greenville, averaged 11 bbls 37.5-gr oil hourly on extended gauge flowing through ¼-in tubing choke, perf 2761-73 ft in

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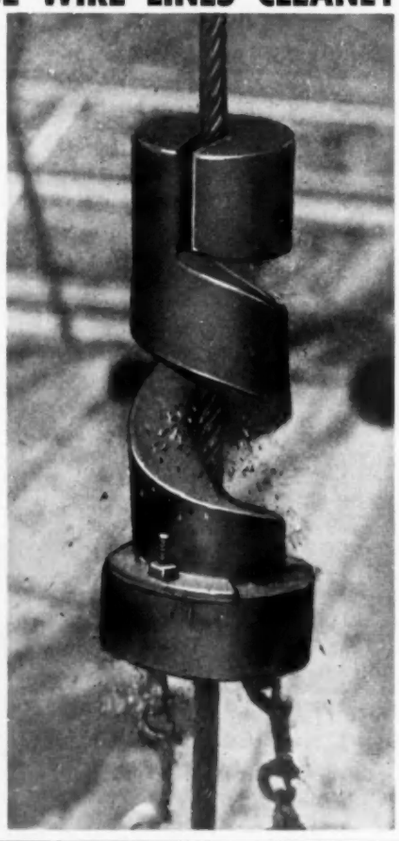

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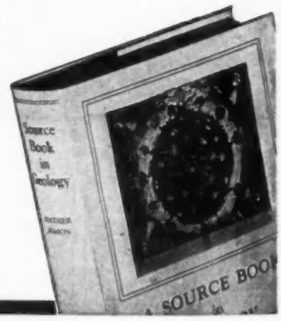

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Woodbine, topped 2762 ft, elev 503 ft. This wildcat is west of previously assumed course of the Mexia-Talco fault plane, and is 200 ft higher structurally than Cable Tool Drilling Co.'s Williams-Humble 1, Paluxy failure at 4632 ft and ¾-mile west by north. Hollandsworth et al are starting second test on discovery tract while other nearby lease owners are to launch drilling campaigns. The faulted structure is expected to embrace 1000 to 2000 producing acres. Gulf has a trunk line in the immediate area, and will provide ample market.

Deep Failure: American Liberty Oil Co.'s McNatt 1, 5 miles west by north of Greenville, Hunt County, abandoned 6895 ft in dry Smackover lime, topped 6696 ft, elev 573 ft. The Smackover series has been tested by comparatively few wildcats in the Woodbine belt.

Navarro County: John Hoosier et al's Black 1, 800 ft from SE and 330 ft from NE lines 40-ac lease, B. G. Balthrope Survey, 2 miles southwest of Bazette and within group of Woodbine failures, opened new pool on the fault trend in testing 3,136,000 ft gas with spray oil through ½-in tubing choke, working pressure on tubing and casing 510 and 710 lbs, respectively. Production from casing perf 3272-79 ft in Woodbine, topped 3153 ft, elev 378 ft, being lower sand while first sand at 3231-54 ft not tested. Unusually low Woodbine depth attributed to hole being 15 degrees off vertical. This strike is 5½ miles northeast of Corsicana-Powell field, and if it becomes commercial oil pool, the surrounding failures will confine production to a "shoe string."

Wildcats: Chas. H. Alexander, Jr. et al's Sides 1, Van Zandt County, idle at 3200 ft, having logged Pecan chalk 2575-2875 ft. Humble's Curtiss 1, Cherokee County, drilling anhydrite and shale 9310 ft. Lower Trinity to be explored Freestone County wildcat being started by Ohio Oil Co. on F. E. Hill 220.6-ac tract, 660 ft from NW and 2682 ft from NE lines, Tobias Dubronner Survey, with block extending into Anderson County.

Wood County: Five of the 6 authorized tests for Black Oak pool, recently opened by Amerada's Kennemer 1 from Paluxy 6262-6350 ft, have started operations.

Anderson County: Magnolia's Fitzgerald 1, west outpost and third test for Concord pool, drilling 3780 ft, logged Pecan chalk 3583-3615 ft, elevation 704 ft, about 100 ft high to discovery, which pumps 105 bbls oil and 34 bbls water.

Chapel Hill: Sinclair Prairie's Mullican 1, southwest edge pool, flowed 207 bbls oil 13 hrs ¼-in, acidized 4000 gals Lower Pettit perforations 8270-8306 ft. Company is drilling 3 additional wells.

EAST TEXAS WATER DISPOSAL WELL

Franklin County: Talco — Humble's Penn-Humble 3-SW, 500 ft from s and 1750 ft from e lines J. D. Bowen sur, 7⅛-in 4443 ft, td 4927 ft, pb to 4538 ft, pumped in water rate 225 bbls hourly.

EAST TEXAS WILDCAT COMPLETIONS

Smith County: Chapel Hill: New Sand—Sun's Friedlander 2, 660 ft from s and 1000 ft from w lines John Slaydon sur, massive anhydrite 7290-7534 ft, Jamestown 8017 ft, Travis Peak 8438 ft, flow 102 bbls 39-gr natural 9/32-in (gas only 1st 9 hrs of gauge then flow steady), Rodessa perf 7741-50 ft, td 8448 ft.

EAST TEXAS WILDCAT START

Houston County—Coastal Refineries et al's Southern Pine 1, 660 ft out nwc 160-ac tr and C. W. Tier sur, 9 mi e Ratcliff, lcn.

Southwest Texas

Ratio of Discoveries High With Curtailed Operations

New fields and sands are being discovered at a more rapid rate in 1942 than in 1941 despite the material curtailment in exploration. The ratio of successes is indicative of concentration of exploration on the more likely prospects.

Jim Wells County: H. R. Smith's Kohler 1, 3660 ft SW of discovery of Quiento field, has been reworked, perf at 4865-70 ft, making 28.1-gr oil, no gauge. Opens new sand and extends field.

Shell's Jones 1, between Von Blucher and Seeligson fields, drilling below 7200 ft, has had several sands with sufficient saturation to indicate commercial well.

LOWER TEXAS GULF COAST FIELD COMPLETIONS

Jackson County: West Ranch—Magnolia's West 213-A, R. Musquez gr, 172 bbls 31.5-gr, ⅛-in, 850 lbs tp, 775 lbs cp, gas/oil ratio 425/1, perf 5735-39 ft, td 5740 ft.

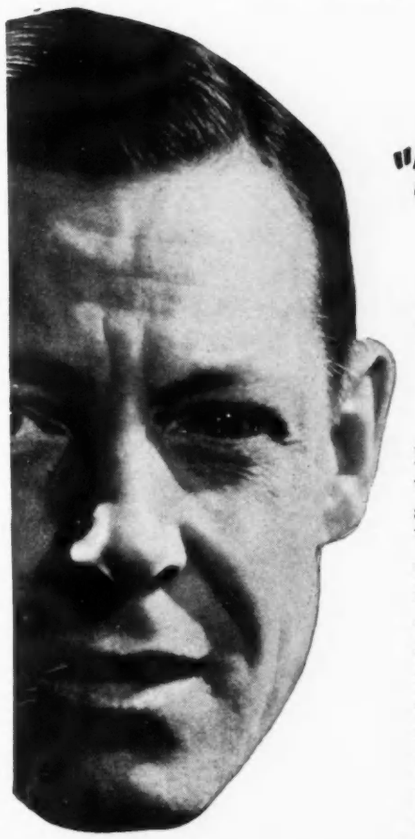
Jackson County: W. Ganado—Pure's Havron 2, S. Rogers sur, abnd 6456 ft.

Nueces County: Agua Dulce—Ginter, Warren & Ginther's Elliff 3, Agua Dulce gr, 136 bbls, ⅛-in, 860 lbs tp, cas sealed, gas/oil ratio 735.1, perf 6913-20 ft, td 7095 ft.

Richardson's Driscol 11, sec 304, 153 bbls 39.5-gr, ⅛-in, 900 lbs tp, 1220 lbs cp, gas/oil ratio 750/1, perf 6548-56 ft, td 6890 ft.

Nueces County: Minnie Bock—Clark & Holland's Robertson 5, sec 43, 48.66 bbls 23.5-gr oil, 8% sw, ⅛-in, 170 lbs tp, 850 lbs cp, gas/oil ratio 38/1, perf 3789-94 ft, td 3807 ft.

Nueces County: Stratton—Chicago Corp.'s



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Wardner 37, sec 9, gas/condensate well, no gauge, perf series 6594-6723 ft, td 6761 ft.

San Patricio County: Odem — Seaboard's Burrows 2, sec 6, 99 bbls 36.6-gr, ⅛-in, 500 lbs tp, 500 lbs cp, gas/oil ratio 445/1, perf 5431-36 ft, td 5557 ft.

Seaboard's Compton 5, blk 9-A, 8 bbls 35.7-gr, ⅛-in, 1900 lbs tp, 1975 lbs cp, gas/oil ratio 64,250/1, perf 5326-29 ft, td 7450 ft.

S.E.W. Oil Corp.'s Whiteley et al 1, sec 13, sp and abnd.

LOWER TEXAS GULF COAST WILDCAT COMPLETIONS

Colorado County: Sheridan New Sand — Shell's Plow 5, F. Mayhar sur, 6000 ft se prod, est 135 bbls 49-gr cond, 2875 lbs wp, 35,000,000 gas, perf 10,168-403 ft, td 11,497 ft.

Hidalgo County: Failure — Baldridge & King's Perez 1 Los Ejidos gr, abnd 6515 ft.

Jackson County: Ganado New Sand—Humble's Branch 5, sec 2, 130.32 bbls 29.5-gr, ⅛-in, 800 lbs tp, 900 lbs cp, gas/oil ratio 605/1, perf 5518-22 ft, td 6700 ft.

Jackson County: Texana New Sand—Gulf's M. K. Simons 2, F. F. Wells Lge, 3810 ft s field, 30,000,000 gas, open flow, perf 5705-10 ft, td 7897 ft.

Jackson County: Failure — Progress Pet. Co.'s K Hillyer 1, J. Davis sur, 2 mi ne Ganado, abnd 6514 ft.

Live Oak County: Failure—Fidelity O&R Co's Brown 2, J. McMullen sur, 8 mi n Mathis, abnd 4700 ft.

San Patricio County: Failure—G. B. Buescher et al's Willis 1, lot 7, sec 20, 5½ mi ne Taft, abnd 6507 ft.

LOWER TEXAS GULF COAST WILDCAT STARTS

Bee County—Rowe & McBride's White 2, 1980 ft nw, 660 ft ne lines 275.9-ac lse, Williamson sur, 3100 ft e No. 1, 4 mi n Tynan, cored 5 ft Vicksburg, 4200 ft.

Hidalgo County—Rowan & Hope's Baker 1, 19,625 ft n, 7187 ft e lines 14,725-ac lse, Santa Anita gr, 27 mi nw Edinburg, 7500 ft test.

Jackson County—Crouch & Mayo's J. J. Kasper 1, 660 ft nw and ne lines blk 12, F. Menefee sur, 2 mi ne Ganado, 6000-ft test.

John G. Mayo's L. Bennett 1, 266.24-ac lse, W. Whitaker sur, 5 mi nw Cordele sur, 6000-ft test.

Rowan & Hope et al's Vance 1, 660 ft s and e lines blk 21, Roseborough sur, V. Garcia gr, 4 mi nw Vanderbilt, 6000-ft test.

Jim Wells County—Rowe & McBride's Z. H. Gorbet 1, 660 ft nel, 467 ft sel blk 46, Dibbrel sub, Casa Blanca gr, 1 mi ne Sandia, 5500 ft test.

San Patricio County — Kirby Pet. Co.'s Jones 1, c s½ lot 6, sec 37, E. Plymouth area, 6500 ft test.

SOUTHWEST TEXAS FIELD COMPLETIONS

Duval County: Cole—Johnson & Coquat's Benavides 4, sec 16, pump 9.54 bbls 19-gr, o on pump, sand 1720-27½ ft, td 1727½ ft.

Jim Hogg County: Chaparosa—W. C. McBride's East 1, blk 276, pump 33 bbls 46-gr, o sand 3455½-59 ft, td 3459 ft.

SOUTHWEST TEXAS WILDCAT COMPLETIONS

Starr County: Failure — E. A. Schmitt's Gonzales 1, sh 232, por 69, 11 mi nw Roma, abnd 3913 ft.

Webb County: Discovery—Magnolia's DCRC 1, Lge 4, 16 mi sw Freer, pump 15.19 bbls 20-gr, perf 1950-68 ft, Mirando sand 1952-70 ft, 7-in cas 2022 ft, td 2638 ft.

SOUTHWEST TEXAS WILDCAT STARTS

Duval County—H. Coquat's Southland 4-C, 753 ft s, 4648 ft e lines blk 1, Ball sub, near Sweden, 6000-ft test.

Starr County—Ordovician Oil Co.'s SCCC 1, Sh 60-0, Por 88-89, Barbacoas area, 5500-ft test.

Zapata County—Dulup Oil Corp.'s M. Garza Hrs 5, 660 ft sw, 3300 ft nw lines blk 102, Douglas sub, s Escobas, 2000-ft test.

SOUTH CENTRAL TEXAS WILDCAT COMPLETIONS

Bastrop County: Failure—Marts & Beaven's Dannely 1, G. J. Glasscock sur, 1½ mi e Elgin, abnd 2995 ft.

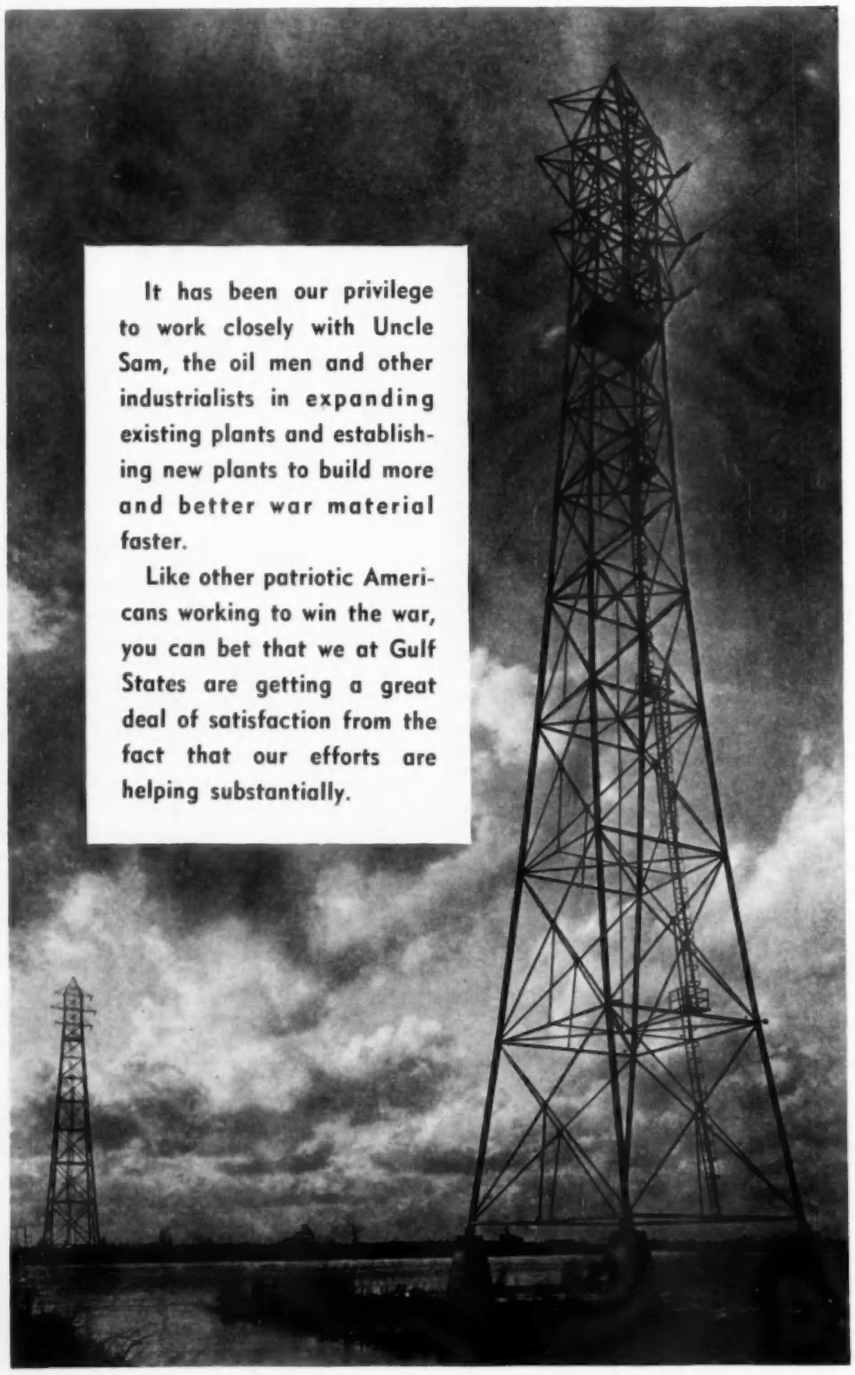
Frio County: E. Pearsall Discovery—Wiegand Bros.' T. J. Gilliam 1-A, BS&F 1, w Pearsall townsite, pump 10 to 12 bbls 44-gr, acidized 4000 gals, top crevice in Taylor marl 4870 ft, bottomed in chalk. Well shut down but will recomplete later, ld 5380 ft.

Milam County: Failure—Fritz Fuchs' J. Clements 1, J. J. Liendo sur, 3 mi e Thorndale, Pecan Gap 1326 ft, Austin 1600 ft, abnd 1626 ft.

Wilson County: Poth Discovery—Holland Oil Co. et al's C. Boysen 1, A. Flores sur, ab 105, pump 31 bbls 26.8-gr oil 26 bbls bracking water, 700 lbs cp, perf 4090-96 ft, Wilcox 4082-4100 ft, 7-in 4177 ft, td 4410 ft.

SOUTH CENTRAL TEXAS WILDCAT START

Williamson County—H. G. Albert's Thompkins 1, 500 ft e, 1125 ft n lines 66-ac tr, P. Coursey sur, 3 mi se Taylor, 1000-ft test.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Texas Gulf Coast

Third Sand Cored in Matagorda County Well

Third sand cored in discovery well in Matagorda County; pipe set in Fort Bend County wildcat; potential run on Wilcox discovery in Polk County.

Matagorda County: Ohio Oil Co. is preparing to make production test in McDonald 1, discovery of a Frio field north of Bay City. Three sands indicate production. The last sand was at 8345-58 ft, but drilled ahead before making production test. First sand at 7865-84 ft, showed 45 stands of oil on drill-stem test. Second horizon, which showed gas and distillate mainly, was at 8031 ft. All three sand sections are Frio and are said to correspond to production levels at Markham, North Markham, and Bay City.

Fort Bend County: Magnolia is making tests in Huntington 2, wildcat northwest of Rosenberg, after drilling to 8903 ft. Sand section was topped around 8006 ft, showing gas and distillate.

Polk County: Jordan Drilling Co. has completed potential on Munson 1, Wilcox discovery at Livingston. Drilled to 7397 ft, perforated 7038-52 ft, flow was at rate of 12 bbls per hour through ¼-in choke, casing 1450 pounds, tubing 300 pounds.

Wilcox Trend: Superior and Atlantic are making new tests in McMahan 1, deep Wilcox wildcat on Deering prospect, Montgomery County. Two tests were made in the 11,700-ft zone, both yielding salt water and a little gas. Sev-

eral more tests of higher levels are planned.

Chambers County: Sun's Jackson 11 has extended Oyster Bayou field ½-mile northeast, flowing 398 bbls through 3/16-in choke. Operators have staked Hebert 1, north of the extension.

TEXAS GULF COAST FIELD COMPLETIONS

Chambers County: Fig Ridge—Texas Co.'s Broussard 8, 660 ft fr s and 2219 ft fr wl HT&B 94, perf 8543-64 ft, flow 724 bbls 34.9-gr, ¼-in, td 8597 ft.

Jefferson County: Stowell—Stanolind & Fidelity's Englin 1, 660 ft fr s and el 80-ac tr T&NO 158, perf 8506-26 ft, flow 236 bbls, 9/64-in, tp 2300, cp 3300, td 9700 ft.

Jefferson County: West Beaumont—Stanolind's Kaufman 3, 2033 ft fr n and 467 ft fr wl 224-ac tr, Hezekiah Williams, flow 124 bbls 26.8-gr, ⅛-in, tp 580, cp 700, gor 124-1, td 5400 ft.

Matagorda County: Collegeport — Pure's Franzen 1, 3600 ft fr n and 3375 ft fr el sec 23, Erastus Yeamans sur, perf 4092-4102 ft, flow 761,000 gas 12-hr, 7/64-in, tp 1600, td 4501 ft.

San Jacinto County: Mercy—Atlantic's Palmer 1, 660 ft fr s and w l and 729 ft fr el 49-ac tr, William Dobie sur, perf 8282-89 ft, flow 720 bbls 37.3-gr, ¼-in, tp 1250, cp 1525, gor 1088-1, td 8311 ft.

Wharton County: Withers—F. W. Michaux's Pierce Est. 53, 5987 ft fr sel Charles Howard sur, flow 106 bbls 25.9-gr, 12/64-in, tp 200, cp 525, gor 553-1, td 5364 ft.

Texas Co.'s Pierce Est. 109, 467 ft fr nwl C lse, John Caldwell sur, perf 5318-24 ft, flow 149 bbls 25.9-gr, ⅛-in, td 5385 ft.

Texas Co.'s Pierce Est. 86, 467 ft fr nwl B lse HE&WT sur, flow 92 bbls 25.3-gr, ⅛-in, td 5390 ft.

Harris County: Humble—J. D. Clay's Bender Est. 28, 200 ft fr w and 1225 ft fr sl 100-ac tr R. Dunman sur, pump 25 bbls 16-gr, td 1054 ft.

Hardin County: Sour Lake—M. J. Ebberts' Hebert & Ebberts 3, 20 ft fr e and 50 ft fr nl lse in Jackson sur, pump 79 bbls, 2026 ft.

TEXAS GULF COAST WILDCAT COMPLETION

Hardin County: Discovery—American Republics & Houston's Hampton Fee 1, sw West Silsbee field, 1174 ft fr n, 10,797 fr el Hampton Lge, open hole, flow 517 bbls 40.4-gr, ¼-in, tp 850, cp 1150, gor 716-1, td 6954 ft, opens Cockfield field.

TEXAS GULF COAST WILDCAT STARTS

Chambers County—Arkansas Fuel's Jackson 1, Jackson Ranch, 1980 ft n and e of sw cor Joseph Whitcomb sur, sw Oyster Bayou field, mim 9600 ft Frio test.

Fort Bend County—John G. Mayo & Morris-Hamilton's Blakely 1, 660 ft fr s and el Thomas Habermacher sur, lcn 8000-ft test.

Harris County — Morris-Hamilton's Goldsmith 1, Barker area, 660 ft fr n and wl 320-ac tr, James Clifford sur, mim, 7500-ft test.

Matagorda County—R. L. Wheelock's McNabb 1, 2 mi sw Matagorda, 660 ft fr n and 1700 ft fr el 185-ac tr, John F. McNabb sur, lcn 7000-ft test.

Montgomery County—Gray & Wolfe's Grogan-Cochrane 1, Magnolia area, 647 ft fr nw and sel and 2018 ft fr swl 157-ac lse, A. Prather sur, lcn 10,300 ft Wilcox test.

San Jacinto County—John G. Mayo's Smith 1, Urbana area, 660 ft fr n and w l's 243-ac tr, J. T. Simpson sur, A-49, lcn Wilcox test.

Wharton County—Temple Hargrove's Hartman 1, Pierce area, 467 ft fr s and el's 40-ac tr, I&GN 10, lcn 4000-ft test.

Louisiana Gulf Coast

Pine Prairie Well Shows; Jug Lake Test Near Record

Test to be made in Sparta section in Pine Prairie flank well; Terrebonne Parish wildcat nears depth record.

Evangeline Parish: Texas Co. has plugged back to 9581 ft from 10,715 ft in LeDanois Land & Stone 2, and will test in Sparta and Wilcox section. A core was taken at 10,436-456 ft in sandy shale with a faint oil odor. Best shows were reported in top of Sparta, which will be a new sand for the field, and will open considerable development on the southwest flank, if productive.

Terrebonne Parish: Superior ran electrical survey to 13,008 ft in LaTerre Land Co. 1, and is now drilling below 13,410 ft, and may go to the deepest level of any well in South Louisiana. Although definite footage on sand horizons has not been released, pipe was set at 11,765 ft, and tests are to be made in sands down to this level, even if no sands are logged below where pipe is cemented. The well is the sixth in the state to drill below 13,000 ft, the same operators holding the record in a well drilled to 13,610 ft.

Beauregard Parish: Tide Water Associated has entered the Neale field, the second operator to stake a location in the area. Atlantic discovered the Wilcox field in 1939, and drilled several wells in the multiple-sand pool. Tide Water will drill Rice Land and Lumber 1 in 34-3s-11w. It is on southwest edge of the field and about ½-mile from production.

Plaquemines Parish: Gulf has completed first gasser in West Bay field, it being the seventeenth well so far drilled. State 4 was perforated at 6740-50 ft, and flowed 1,596,000 gas through 5/32-in choke, tubing pressure 2700 pounds.

In the Venice field, Tide Water picked up 165 ft of oil sand in Buras Levee District 16 at 10,730-895 ft; drilling to test lower horizons before plugging back to make test.

SOUTH LOUISIANA FIELD COMPLETIONS

Calcasieu Parish: Sulphur Mines—Union Producing Co.'s Fee 883, 602 ft n, 1792 w se cor nw 29-9s-10w, perf 4745-60 ft, flow 62 bbls, 12/64-in, tp 160, cp 350, gor 266/1, td 4918 ft in salt.

Cameron Parish: Black Bayou—Shell's Watkins 51, 695 ft n, 2968 w se cor 6-12s-12w, perf 7627-39 ft, 7645-60 ft, 7672-7722 ft, flow 308 bbls 10/64-in, tp 1625, cp 1890, gor 925/1, td 7788 ft.

Evangeline Parish: Ville Platte—Continental's Fontenot-Deshotels 3, 2715 ft ne s cor A. E. Fontenot tr on boundary between Fontenot & Deshotels trs in 44-3e-2e, perf 9032-46 and 10,226-36 ft, flow 195 bbls, 9/64-in, dual completion, td 10,243 ft.

LaFourche Parish: Valentine—Shell's Edna Plantation 2, 1480 ft sw'ly alg e l sec 66 fr ne cor thence 120 ft at ra in 66-17s-20e, abnd 10,000 ft.

Plaquemines Parish: West Bay—Gulf's State PP 4-192, 645 ft n, 3970 w se cor 35-20s-30e, perf 6740-50 ft, gas, no est, 5/32-in, td 7740 ft.

St. Charles Parish: Paradis—Texas Co.'s Sunset Realty & Planting 5, 4697 ft s, 2444 e ne cor sec 8, in 38-14s-20e, perf 10,075-100 ft, flow 486 bbls, 3/16-in, tp 1725, gor 776/1, td 10,300 ft.

St. Landry Parish: Port Barre—Texas Co.'s Botany Bay Lumber 33, 4272 ft n, 2116 w of most s'ly cor 4-6s-5e, perf 6104-24 ft, flow 210 bbls 36.6-gr, 10/64-in, td 6210 ft.

Grubb & Hawkins Watkins 3, go 1500 ft s alg e l from nec and 360 ft w at ra in 4-6s-5e, perf 6285-6308 ft, flow 129 bbls, ⅛-in, tp 760, cp 1220, td 6875 ft.

St. Mary Parish: Belle Isle—Sun's Belle Isle-State 1, 4875 ft n, 1099 e sw cor 19-17s-11e, abnd 12,012 ft.

St. Mary Parish: West Cote Blanche Bay—Texas Co.'s 15-340, n 30 deg 55 min e, 25,801 ft fr USCGS Monument "Ned" in bay T-15s-6e, perf 8430-41 ft, flow 195 bbls 33 gr, 9/64-in, tp 1125, gor 728/1, td 8595 ft in salt.

SOUTH LOUISIANA WILDCAT START

Terrebonne Parish — Humble's Continental Land & Fur 1, Turtle Bay prospect, fr sw cor sec 31, go 2738 ft alg sl, thence 1671 ft n'ly at ra in 31-17s-14e, company rig, lcn.

Rocky Mountain Area

Plan Test to Ordovician with Colorado Wildcat

Colorado wildcat will test to Ordovician. Circle Ridge, Wyoming, extended.

Colorado: Continental is rigging Young 1, SW SE SE 11-19s-65w, on a 5000-acre block covering well-defined Steele Hollow structure, 10 miles north of Pueblo. Will test all formations through Pennsylvanian to Ordovician, 6200 ft, on Steele Hollow basinward fold off the flank of Pike's Peak Arch. Inconclusive test drilled by Phillips in 1925 quarter

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mile north of Continental location went only to Dakota 1240 ft.

Circle Ridge: Wyoming's No. 1 shallow oil field, Circle Ridge, extended quarter mile east by Continental's Shoshone Indian Lease 2-309, NW SW NW 6-6n-2w, bailing 500 bbls daily on 8-hr test. Total depth 613 ft, 8⅝-in 588 ft atop Tensleep sand.

North Kevin Failure: Attempt to extend North Kevin area, R. G. Parrent's Davis 1, CSE SE 3-36n-3w, mile northwest of his Holbrook 1, north Kevin discovery, failed, hole full of sulphur water, at 2095 ft. Top of Madison 2063-77 ft yielded 300 ft of oil, but failed to respond to acid.

MONTANA COMPLETIONS

Glacier County: Cut Bank—Consolidated Gas Co.'s Tribal 2, se se sw 10-34n-6w, swab 15 bbls, Lower Cut Bank 2921-26, td 2940 ft, elev 3741 ft.

Glacier Production's Miller 9, c e 1 ne nw 32-33n-5w, abnd 2980 ft.

J. D. McKenzie's Tribal 1-212, nw sw nw 29-32n-5w, swab 14 bbls, Lower Cut Bank 2780-2800 ft.

Texas Co.'s State 11-455, c se se 10-32n-5w, swab 180 bbls, Lower Cut Bank 2817-28, td 2848 ft, elev 3683 ft.

Wm. Hanlon's Tribal 3, sw nw ne 30-32n-5w, swab 648 bbls, Lower Cut Bank 2928-44 ft.

WYOMING COMPLETIONS

Park County: Oregon Basin—Enalpac Oil & Gas Co.'s McMahon 3, nw se sw 32-51n-100w, flow 400 bbls, 3574 ft.

Texas Co.'s Freeman 2, c sw ne 20-51n-100w, pump 330 bbls, 7% water, 3876 ft.

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■ FLEET SUPERINTENDENT WANTED: Major oil producing company has an opening for an automotive superintendent. Applicant should be capable of supervising operations and maintenance of oil field automotive equipment, including diesel engines. In replying state age, experience in detail and status regarding military service to Box 74, c/o Oil Weekly, Houston, Texas.

SITUATIONS WANTED

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P. O. Box 2608 Houston, Texas

California

Ventura County Outpost Produces

Penoche Creek-Mendota area wildcat in Fresno County abandoned; small body of oil sand cored in Los Angeles County test; outpost well is producer in Ventura County.

Fresno County: Jergins Oil Co.'s Cheney Ranch 3, wildcat in 30-14-13, Penoche Creek-Mendota area, is being abandoned after drilling to 7703 ft. Bottom is in sand and shale. Streaks of sand showing light amber cut topped at 6900 ft did not promise commercial production. Packer failed on formation test interval 6900-6933 ft.

Los Angeles County: In taking its Buena Park Unit 1, wildcat in the Buena Park area, 6-4-10, to 8470 ft The Texas Co. is reported to have cored through approximately 20 ft of oil sand. Well is now drilling and coring at 8493 ft in oil sand, sand and shale.

Ventura County: Shell has completed Taylor 154, northern flank outpost in the Ventura Avenue field in the "57" zone at 9750 ft, flowing 2458 barrels of oil and 1,836,000 gas daily. Completion is second northerly outpost brought into production in past two months.

CALIFORNIA COMPLETIONS

Fresno County: Coalinga—Texas Co.'s Pleasant Valley Farming C-1, 1810 ft n, 1648 w se cor 6-20-15, pump 34 bbls 16.9-gr, 91 ft perf 2128 ft, td 2128 ft.

Kern County: Belridge South—Belridge's 67A-33, 919 ft n 1593 w se cor 33-28-21, pump 75 bbls 16.7-gr, 284 ft perf 771 ft, td 771 ft.

Union's Hopkins 43-10; 1650 ft s, 330 w n¼ cor 10-29-21, pump 121 bbls 14.1-gr, 130 ft perf 1179 ft, td 1990 ft.

Kern County: Coles Levee — Richfield's KCL-A 74-30, 2305 ft s, 951 w ne cor 30-30-25, flow 650 bbls 34.3-gr, 10/64-in bean, 400/900 lbs, 591 ft perf 9329 ft, td 9375 ft.

Kern County: Mount Poso—Chanslor-Canfield Midway Oil Co.'s Mon 4, 330 ft s 1200 e nw cor 26-27-28, pump 75 bbls 16-gr, 50 ft perf 1475 ft, td 1476 ft.

Kings County: Kettleman North Dome—Standard's N. 4-27Q, 2540 ft s, 316 e nw cor 27-22-18, gas lift 1303 bbls 39.9-gr, 104 ft perf 7825 ft, td 7827 ft.

Los Angeles County: Wilmington — Union Pacific's UP 217, 6349 ft s, 1925 e c/ls Ford & Anaheim, flow 197 bbls 27.6-gr, 210/460 lbs, perf 2538-2669, 2737-2788, 2942-3032, 3066-3129, 3144-3188, 3213-3260, 3280-3389 ft, pd 3395 ft, td 3419 ft.

Orange County: Huntington Beach—Southwest Exploration Co.'s State 52, 188 ft n'ly 3244 ft w'ly c/ls 23rd and Ocean, pump 230 bbls 23.3-gr, 731 ft perf 5221 ft, td 5221 ft.

Tulare County: Trico—Trico Oil & Gas Co.'s Lee 2, 2640 ft s, 1320 w ne cor 17-24-23, flow 27,170 gas, 1-in bean, 950 lbs, 70 ft perf 2480 ft, td 2485 ft.

Ventura County: Sespe—H. A. Ivers' Kentuck 13½, 1150 ft s, 250 e nw cor Kentuck lease in 1-4-20, pump 25 bbls 25.7-gr, 200 ft perf 1615 ft, td 1615 ft.

Ventura County: Ventura Avenue—Shell's Taylor 154, 690 ft n, 9430 w c/l No. 11, flow 2458 bbls 30.1-gr, 350/1110 lbs, perfs 9745-9604, 9566-9258, 9220-8971, 8931-8430 ft, td 9750 ft.

CALIFORNIA WILDCAT COMPLETIONS

Kern County Failure: Burrel Area—Richfield's Schultz 1, 989 ft s 997 w n¼ cor 27-16-18, Kreyenhagen 7210, Eocene 7760, Domengene 6666 ft, abnd 7801 ft.

Kern County Failure: Antelope Hills-Belridge—Chanslor Canfield Midway Oil Co.'s Antelope Fee 7-1, 330 ft s, 1652 w ne cor 7-28-20, oil spots 2141-2161 ft in Kreyenhagen, abnd 3643 ft.

Los Angeles County Failure: Puente Hills-Turnbull Canyon—R. S. Lytle's Corehole A, 970 ft s, 373 e c 15-2-11, abnd 678 ft.

CALIFORNIA WILDCAT STARTS

Fresno County—Amerada Petroleum Corp.'s Clover 75-34, 32-21-16, Grading roads, Helm area.

Kern County—Chanslor-Canfield Midway Oil Co.'s 24-1, 1-32-22, lcn, Midway-Northwest area.

Kern County—Trico Oil & Gas Co.'s Glide 1, 1-27-27, rig, Mount Poso area.

Kings County—Elmer C. von Glahn's No. 1, 4-23-22, rig, Alpaugh area.

Tulare County—Trico Oil & Gas Co.'s TWA Fee 1, 16-24-23, lcn, Trico area.

Michigan

Completion List Sets New High for Year

Twenty-five completions, including eight wildcats, set year-high. Offset producers to two 1942 discovery wells point to promising pools as Riverside area loses interest with fourth discovery offset failure.

Evart: Sun's Wirth A1, N½ SE SE 22-18n-8w, Osceola County, first completion since the discovery, flowed 190 bbls net natural from Dundee lime at 3825 ft. Sun announced four locations.

Adams: North offset to the discovery, Ervin Major's White 1, 25-19n-3e, Adams township, Arenac County, flowed and swabbed 47 bbls natural from Monroe lime at 4213 ft, and increased to 240 bbls with 2000 gal acid treatment. First follow up completion to Major's Adams 1, Section 36, which provided first big deep Monroe producer for state. Five derricks, two locations followed second well.

Riverside: Gulf's Bronkhorst 1, N½ SW NE Section 14-21n-7w, 1320 ft east Riverside discovery well, bottomed Dundee lime dry at 3953 ft to mark fourth offset failure to discovery well.

MICHIGAN FIELD COMPLETIONS

Allegan County: Salem—Fortney & Broughton's Brzezinski 1, se se nw 24-4n-13w, abnd 1728 ft.

Arenac County: Adams — Ervin Major's White 1, c se se 25-19n-3e, Monroe, pump and flow 240 bbls after acid, 4213 ft.

Bay County: Kawkawlin—Gulf's Bauer 1, s½ ne se 35-15n-4e, Dundee, flow 79 bbls 12 hrs after acid, td 2900 ft.

L. C. MacGregor's Kircher 2, nw se nw 2-14n-4e, Dundee, pump 190 bbls, 2865 ft.

Clare County: Winterfield (East) — Sun's State A2, s½ sw nw 6-19n-5w, Monroe flowed 300 bbls after acid, 3807 ft.

Clare County: Hamilton — Sun's McClure-Wilson 1, c sw 9-19n-3w, abnd 1415 ft.

Lake County: Sauble—Louis Rose's Twin Lakes 1, c ne sw ne 16-19n-14w, Traverse, pump and flow 60 bbls, 2156 ft.

Missaukee County: Riverside—Gulf's Bronkhorst 1, n½ sw ne 14-21n-7w, abnd Dundee 3953 ft.

Osceola County: Evart—Sun's Wirth A1, n½ se se 22-18n-8w, flowed 190 bbls, Dundee 3825 ft.

Taggart Bros. Co.'s Arndt-Oren 14, c se 27-18n-8w, Stray sand, 7,800,000 gas, Stray sand 1378 ft.

Osceola County: Reed City—Gulf's Fulmerhouser 1, n½ se ne 5-17n-10w, flow 471 bbls, Monroe 3550 ft.

Otsego County: Otsego—Rinehart & Hickok's AuSauble 2, c sw 26-30n-3w, 50,000 gas, Antrim 1475 ft.

Rinehart & Hickok's AuSauble 4, c se 10-29n-3w, 40,000 gas, Antrim 1600 ft.

Roscommon County: Richfield—Ohio's State D1, n½ nw nw 28-24n-1w, flow 44 bbls, Monroe 4198 ft.

Ohio's Van Wagoner 1, n½ nw se 28-24n-1w, flow 72 bbls, Monroe 4195 ft.

Sun's State A1, n½ se nw 29-24n-1w, flow 147 bbls, Monroe 4197 ft.

Roscommon County: Headquarters—Pure's State D1, n½ sw ne 34-21n-3w, abnd Traverse 3454 ft.

MICHIGAN WILDCAT COMPLETIONS

Allegan County: Failure—Union's Arnst 1, w½ se sw 2-3n-13w, Traverse 1667 ft, abnd 1684 ft.

Clare County: Failure—Gordon Oil Co.'s State H1, s½ se ne 30-19n-4w, Dundee 4258 ft, abnd 4308 ft.

Kent County: Failure—Jetter & DeKraft's Auble 1, se se ne 9-6n-10w, abnd Traverse 2464 ft.

Mecosta County: Failure—Belvidere Oil Co.'s DeCousser 1, nw nw nw 13-16n-7w, abnd Stray sand 1507 ft.

Missaukee County: Failure—Franklin Pet. Dev. Co.'s Bonninghausen 1, se sw ne 8-22n-8w, Dundee 3757 ft, abnd 3891 ft.

Ottawa County: Failure — Fisher-McCall's Van Spyker 1, c se sw 29-5n-13w, Traverse 1608 ft, abnd 2017 ft.

Ottawa County: New Field—D. M. Leonard's Nykamp 1, se sw se 30-5n-14w, pump 60 bbls, 1540 ft.

Van Buren County: Failure—James Conant's Niles 1, sw nw se 30-1s-13w, Traverse 1342 ft, abnd 1347 ft.

MICHIGAN WILDCAT STARTS

Barry County—Sun's Mead 1, s½ sw sw 10-3n-9w, lcn.

Montcalm County—Chapman Oil Co.'s Fraze 1, s½ se se 22-10n-6w, rig.

Ottawa County—G. C. Gerrard's Beckwith 1, se sw sw 32-8n-13w, lcn.

Eastern States

NEW YORK COMPLETIONS

Allegany County — Bradley Prod. Corp., Nobles farm, Alma, 5 bbls, Richburg, 1320 ft.

Sawyer Prod. Co., Smith farm, Bolivar, 7 bbls, Waugh-Porter, 1335 ft.

South Bolivar Oil Co., McKelvey farm, Bolivar, 7 bbls, Richburg, 1327 ft.

South Bolivar Oil Co., McKelvey farm, 5 bbls, Richburg, 1355 ft.

Central Oil Co., Holtum farm, Scio, 7 bbls, Richburg, 1163 ft.

Harris & Buehring, Allen farm, Scio, 10 bbls, 1245 ft.

Helen Randall, Reid farm, Alma, 15 bbls, Richburg, 1437 ft.

George Oil Co., Scott farm, Alma, 8 bbls, Richburg, 1366 ft.

Marsh Oil Co., Fay farm, Bolivar, 8 bbls, Richburg, 1438 ft.

Bradley Prod. Corp., Beers farm, Bolivar, 7 bbls, Richburg, 1419 ft.

Cousins Oil Co., Brandes farm, Wellsville, 7 bbls, Fulmer, 1372 ft.

Bradley Prod. Corp., Coats farm, Wirt, 7 bbls, Richburg, 1380 ft.

I. & H. Oil Co., Peterson farm, Wirt, 6 bbls, Richburg, 1429 ft.

Sawnett Oil Co., Merritt farm, Genesee, 8 bbls, Richburg, 1423 ft.

INTAKE WELLS

Allegany County — Bradley Prod. Corp., Nobles farm, Alma, Richburg, 1259 ft.

South Bolivar Oil Co., McKelvey farm, Bolivar, Richburg, 1334 ft.

Conklin & Reeland, Swarthout farm, Wirt, Richburg, 1129 ft.

Ebenezer Oil Co., Vincent farm, Scio, Richburg, 1083 ft.

Bradley Prod. Corp., Rolls farm, Alma, Richburg, 1169 ft.

J. F. McBride, Duke farm, Alma, Richburg, 1320 ft.

J. P. Herrick, Howe farm, Bolivar, Richburg farm, 1425 ft.

L. H. Thornton et al, Fassett farm, Willing, Fords Brook, 1252 ft.

South Hill Oil Co., Harrington farm, Wellsville, Fulmer, 1356 ft.

E. M. Hill Est., Hill farm, Genesee, Richburg, 1289 ft.

Martin O'Connor Est., O'Connor farm, Genesee, Richburg, 1344 ft.

Wightman & Conkling, Wetherby farm, Clarksville, Nile, 1430 ft.

OHIO COMPLETIONS

Ashland County—Konrad & Son's Franks 1, 8 bbls, 702 ft.

Preston Oil's Sunday Creek Coal Co. 208, abnd, 3668 ft.

Stewart et al's Helbert 1, abnd, 2388 ft.

Coshocton County—Blackburn et al's Oxley 3, 0.13 gas, 3140 ft.

Knox County—James Upham's Gaines 1, 0.03 gas, 2870 ft.

Loraine County—Edson & Son's Sorger 1, 0.9 gas, 2380 ft.

Medina County—Belmont Quadrangle's Metropolitan Park Board 1, 0.2 gas, 3467 ft.

Meigs County—Fugate et al's Miller 2, 0.32 gas, 747 ft.

Frank Utsinger's Kennedy 1, abnd 810 ft.

Morgan County—Industrial Gas Co.'s Eppley 2, abnd 4361 ft.

Muskingum County—Industrial Gas Corp.'s Jenkins & Elliott 1, abnd 3470 ft.

Ohio Fuel Gas Co.'s Gallegly 1, 0.03 gas, 3720 ft.

Noble County—R. L. Smithberger's Kilzer 6, 0.05 gas, 1240 ft.

Perry County—Preston Oil's Cookson 7, 159 bbls, 3281 ft.

Preston Oil Co.'s Wagner 2, 149 bbls and 0.05 gas, 3339 ft.

Industrial Gas Corp.'s Cooperrider 1, 15 bbls, 2820 ft.

Preston Oil's Keffer 1, 112 bbls and 0.05 gas, 3315 ft.

Stark County—Barber's Belden et al 2, 1.8 gas, 4736 ft.

Tuscarawas County — Brendel Prod. Co.'s Dessecker 2, 0.8 gas, 5068 ft.

Washington County—Liberty Oil & Gas Co.'s Remenschneider 12, 2 bbls, 1742 ft.

Newport Oil's Adkins 26, ½ bbl, 475 ft.

Wayne County—Mehowa O. & G. Co.'s Rickabaugh 2, 3.26 gas, 3181 ft.

PENNSYLVANIA COMPLETIONS

Armstrong County—John Wray et al's Calhoun 1, 0.05 gas, 3100 ft.

Humphries, Stone & McCall's Peoples 1, gas, 3708 ft.

Clarion County—Owens, Illinois Glass Co.'s Barnhart 3, 0.36 gas, 1160 ft.

Joseph Galbraith et al's Fleming 1, 0.14 gas, 2607 ft.

Fayette County—William Dodds et al's Caseber 1, 0.02 gas, 1382 ft.

WEST VIRGINIA COMPLETIONS

Boone County—So. Penn. Nat. Gas Co.'s Yawkey-Freeman 1, 0.28 gas, 2151 ft.

Calhoun County—Clem S. Morris' Van Camp 1, 0.67 gas, 1639 ft.

Jackson County—United Fuel Gas Co.'s Starcher 5087, 18.15 gas, 5225 ft.

United Carbon Co.'s Perkins 13, 11.89 gas, 5311 ft.

Kanawha County—Columbian Carbon Co.'s Jackson 1, 1.93 gas, 5229 ft.

Columbian Carbon Co.'s Painter 1, abnd 5296 ft.

Marshall County—Mfgrs. Light & Heat Co.'s Franklin 3652, 0.19 gas, 1591 ft.

Putnam County—Summit Gas & Dev. Co.'s Caldwell 2, 0.04 gas, 2337 ft.

Ritchie County—Hope Nat. Gas Co.'s Randolph 8614, 1.4 gas, 1674 ft.

Upshur County—Cumberland & Allegheny Gas Co.'s Elmer 320, 1.08 gas, 2380 ft.

Wood County—So. Penn. Nat. Gas Co.'s Bigelow 2, abnd 2061 ft.

OLD WELL DRILLED DEEPER

Braxton County—Pitts. & W. Va. Gas Co.'s Howell 739, otd 1768 ft, abnd 2622 ft.

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Men in the Industry's News

E. L. DeGOLYER, newly appointed assistant deputy coordinator for OPC, is a prominent petroleum scientist and oil man. He is a former member of the United States Geological Survey, and then became chief geologist for Mexican Eagle Oil Company from 1909-14, when he entered the consulting business and was identified with early geophysical work. He organized Amerada Petroleum Corporation, and served the company as vice president, president and chairman of the board in the period from 1929-32. Since that time he has engaged in the oil business as an independent operator and consulting geologist-engineer, and currently is senior member of the firm of DeGolyer, MacNaughton & McGhee. He was appointed Director of Conservation when OPC was organized, which post he leaves to take up his duties as assistant deputy coordinator.

He is a former president of both the American Association of Petroleum Geologists and the American Institute of Mining and Metallurgical Engineers. DeGolyer has been the recipient of more service awards than any other oil man, receiving the distinguished service award of the Texas Mid-Continent Oil & Gas Association in 1939, the Lucas medal of A.I.M.E. in 1940 for "initiating applied geophysics, directing early practical seismic exploration, and fostering applied science in finding, developing and reducing oil." In 1942 he was awarded the John Fritz medal of the A.I.M.E., past recipients of which include such men as Lord Kelvin, George Westinghouse, Orville Wright, Thomas A. Edison, Guglielmo Marconi and Herbert Hoover.

BOB HORTON has been appointed manager of oil-country sales for Link-Belt Company, with headquarters in Houston. Horton has been associated with Link-Belt Company for the past 7 years as oil-country sales representative, covering the Gulf Coast and Southern districts. In his new capacity, he will serve the Mid-Continent and Rocky Mountain district. Fred (Pete) Wallace, formerly manager of oil-country sales for the company at Houston, has been transferred to the main plant in Indianapolis. Wallace has been associated with the sales department for the past 14 years, having represented the company in Oklahoma, New Mexico, Texas, Louisiana, and foreign fields.

HORTON

WALLACE

JOE S. BLACKMAN, deputy conservation officer in charge of the Tulsa office of Oklahoma Corporation Commission, is leaving to take a post in the Army Air Corp, Miami Beach, Florida.

PAUL YOUNGMEYER is a new addition to The Texas Company land department at Wichita, transferring there from Mattoon.

J. M. COLLINS, Trigg Drilling Company superintendent, Oklahoma City, has moved to Shawnee.

HOBART C. RAMSEY, vice president in charge of operations of Worthington Pump and Machinery Corporation, Harrison, New Jersey, on behalf of plant employes, accepted the Navy "E" in ceremonies at Harrison, June 26.

ALBERT H. PIERCE, formerly district superintendent for Mid-Continent Petroleum Corporation at Seminole, has been appointed superintendent of the production department's southern division and will be located in Tulsa. He succeeds the late G. W. Showalter. Marvin Ridgon will assume Pierce's duties in the field, while R. E. Wingo becomes district foreman in Oklahoma City, succeeding Rigdon.

WILLIAM DAVIS, Kewanee Oil Company, Shidler, Oklahoma, has been named field superintendent for the company's Osage region, succeeding John Ross.

W. F. ROCKWELL, president of Pittsburgh Equitable Meter Company and Merco Nordstrom Valve Company, who is serving as director of production for the Maritime Commission in Washington, was recently elected president of the Association of Gas Appliance and Equipment Manufacturers. In addition to his duties with the Maritime Commission, he also serves as a member of the executive committee, Army and Navy Munitions Board and War Production Board, Material Requirements Section.

S. D. BUTCHER and J. Lloyd Carey of Wichita, Kansas, who have been operating under the name of Rocket Drilling Company, have announced dissolution of partnership. Carey's new address will be 610 Orpheum Building and Butcher's 1306 Union National Bank Building. Butcher will continue drilling and producing operations under the name of Rocket Drilling Company and Carey will operate individually.

WALT BOWEN, president of Bowen Company of Texas and son of S. R. Bowen of Huntington Beach, California, was killed last week in an airplane accident in California. He had been engaged in bomber ferry service for some time.

Squeaks from the Bull Wheel

Chicken One Day, Feathers the Next

By Nannette Bunte

(This essay was written by Miss Bunte, a student at the University of Houston, and daughter of C. B. Bunte, Gulf Coast oil man).

"Life is a gamble." I was teethed on that bit of proverbial wisdom. It really isn't a wise saying at all, but just an oil man's excuse for being one (and believe me, at times he needs an excuse).

The youth of an oil man's daughter is not an ordinary one. All the normal, everyday experiences that other children had were always just a little bit different from mine. The most vivid in my memory were those Sunday afternoons when other children's parents took them to the zoo or riding in the country. We rode in the country, too, but not along the highway looking at beautiful scenery. No, we always turned off in odd places and drove down rough, dusty roads or roads which were so muddy that they were covered with wooden planks. What we saw could neither be called beautiful nor scenery —just a lot of dry, empty fields. Empty that is except for a high tower of steel which Daddy fondly called a derrick. To me it was just a lot of noise and dirty men yelling at each other in loud voices above the clatter of the moving machinery. For a while we would play around the derricks and watch the waste spurt from long pipes into a dirty pool; or annoy the men until we were told through gnashed teeth to go and wait in the car. Then it was but a matter of hours. When the machinery finally stopped the men would crowd together and the air would be tense. Finally Daddy would return to the car and we would know the results. Sometimes he would bounce back with a wild exalted look in his eyes and with a small container of black, greasy liquid in his hands. Then we were all very happy. But other times he would walk slowly back to the car and mutter "salt water." Those were the only two words said during the long miles back home. Even to this day I have a feeling of distaste when I hear those words mentioned.

An oil man's daughter grows up with funny ideas, the Patrick Henry Type of "liberty or death" ideas. You see moderation means nothing to an oil man; he lives by the theory of all or none. As a child I can remember the *all* as living in big houses, driving in big cars and having lots of servants. The *none* part to me usually meant still living in the big house (because they were so hard to get rid of), having the big cars sitting in the garage, because there was no gas to run them, wearing last year's clothes, and eating in the breakfast room instead of the dining room because without servants it was easier that way.

I have heard people say that home movies are a marvelous way to record the history of a family. We have been taking them since I was five years old, but ours are more like a history of the oil business. My blood begins to boil when I think of all the precious color films that have been wasted on dry, dead landscapes and derricks and oil tanks. Every now and then one of the family had the privilege of a wave and a smile but immediately the scene would shift back to the tanks. Last year when Mother and Daddy went to Mexico they took the movie camera with them. When the films were ready to be shown did I see old cathedrals or picturesque little villages? No, *Mexican* oil fields!

But no matter how much an oil man's daughter criticizes and complains about that kind of life, don't believe her. She really loves it. There is nothing more exciting than the anticipation of things to come with uncertainty as the keynote. A fortune teller would have an awful time telling her future because it's not even in the cards.

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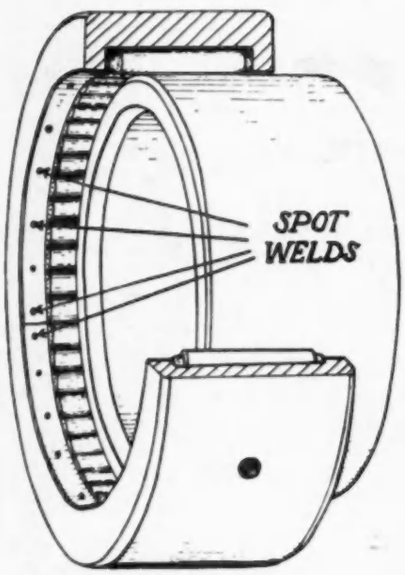
KEEP PURE DRINKING WATER ALWAYS HANDY

Notes for the Equipment Buyer and User

Quill Bearings

BANTAM BEARINGS CORPORATION

Bantam Bearings Corporation, South Bend, Indiana, has announced an improved method of installing the roller retaining rings of Bantam Quill Bearings by spot welding, which it is said not only gives a sturdier, more permanent assembly, but considerably speeds up production of the anti-friction unit.



Bantam Quill Bearing

As illustrated, the large number of small diameter rolers are held in place in the outer race by retaining rings. Not only does the new spot welding method simplify the machining operations, thus speeding assembly, but it gives a positively located and permanently placed band which will not snap loose under any ordinary conditions.

The illustration also shows another important design feature of this compact, anti-friction unit. That is when the entire load is carried to the solid outer race—none of the load, axial or thrust, is against the retaining rings which serve solely to hold the rollers in place, facilitating handling, assembly, and disassembly.

Materials handling equipment, automotive assemblies, speed control equipment, many machine tool applications, and in petroleum producing machinery are among the important fields where the Quill Bearing has demonstrated its efficiency over the period of more than four years since it was introduced.

Trailers

HOBBS MANUFACTURING COMPANY

Hobbs Manufacturing Company, Fort Worth and Houston, has built several different types of gooseneck lowboy trailers, in response to requests for heavy-duty trailers to use with oil field truck bodies.

Using a Hobbs oil field truck body, the illustrated heavy duty lowboy moves a 110,000-pound caterpillar drag line with ease and with speed. This equipment was recently said to be moved in one day over a route which would have required three days by rail.

The fifth wheel of this hook-up is attached to the trailer, so the trailer can be moved and the truck with oil field body may be used for other purposes. The truck can be used separately or with pole trailer.

Crate Grab and Carrier

CLEVELAND TRAMRAIL & ENGINEERING COMPANY

Cleveland Tramrail Division of Cleveland Crane & Engineering Company, Wickliffe, Ohio, has announced the motor driven crate grab and carrier designed for handling crates and boxes in and out of storage, or from one elevator to another.

The unit enables quick stacking or removal of crates at a great height with safety. This makes possible faster handling, and also greater storage capacity of a given area.

The grab and carrier are completely motorized with all operations conveniently controlled by the six buttons of the push-button station. If desired this type unit can be provided with an operator's cab in which all controls may be located.

The arms of the grab are extended and retracted by means of geared slide bars that are driven by the motor mounted on top of the grab. Power is supplied to this motor through a flexible cable that is held taut by a spring-type retrieving reel.

Steel Flooring

Kerlow Steel Flooring Company, 21 Mallory Avenue, Jersey City, New Jersey, has issued a folder on open steel flooring and steps. The folder concisely describes the principal patterns of gratings and their applications, including a tabulation of safe loads for various sizes, weights, and lengths, and details of construction and methods of installation.

Jacobson Issues New Oil, Gasoline Pipe Line Map

E. C. Jacobson, 801 McBirney Building, Tulsa, Oklahoma, has issued a new crude oil and gasoline pipe line map of the United States. The map shows gasoline pipe lines in red, crude oil lines in black dashed and dotted so lines can be traced, the intracoastal waterway from Corpus Christi to New York, the new 24-inch Longview-Salem pipe line, key refineries with capacity barrels of crude per day, and cities and towns. It is 54 inches by 75 inches in size. Prices are $32.50 for paper type and $35 for linen.

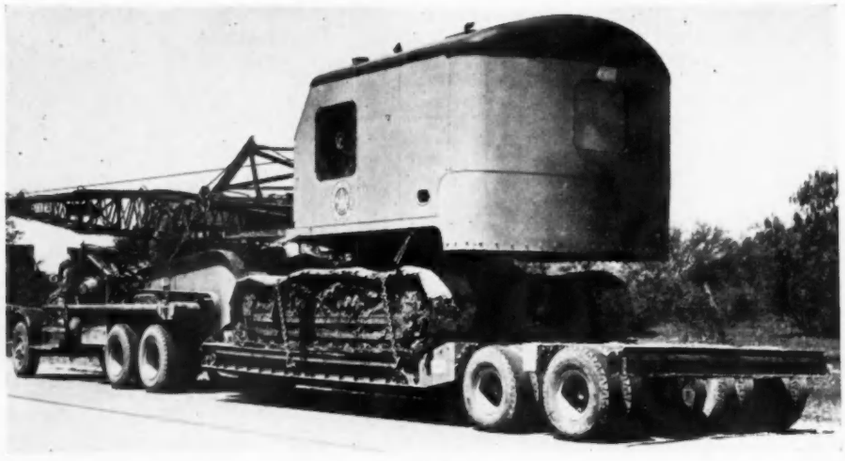
Warner & Swasey Initiate "Ideas for Victory" Program

Warner & Swasey, Cleveland, Ohio, manufacturers of turret lathes, has initiated a program designed to help speed production of vital war materials. Generally speaking, it is a "ideas for victory" program whereby ideas for speeding up lathe production of war products are exchanged and men desiring them are given citations.

Due to scarcity of materials, and with turret lathes a very important part of the production campaign, thousands of operators must do the best with what they have at hand. Many of them have shown praiseworthy initiative and a lot of ingenuity in getting more production, or more accurate work from their turret lathes and turret lathe tools.

With the idea that exchange of such information would prove helpful to the war effort and that personal recognition of good work would encourage individual effort and build morale among machine shop workers. Warner & Swasey set about to accomplish these ends. Hundreds of practical ideas have been sent to Warner and Swasey. Some have been selected for trade paper ads, and practically all will be explained and passed along in Blue Chips, a Warner & Swasey shop bulletin sent monthly to nearly 30,000 turret lathe operators, and available to others without charge.

All worthwhile suggestions are



Hobbs Trailer

Extending the life of pumping unit gears

Information supplied by "The Oil Weekly"

Under present conditions the maintenance of pumping unit gears is an important matter.

Two suggestions, leading to longer life of gears, have come from manufacturers and oil companies alike. Both are made on the assumption that the equipment is being operated within its rated capacity. They are:

1. Proper alignment. 2. Adequate lubrication.

In the matter of alignment, the operator in the field, of course, must see to it that the foundation is adequate to the machinery and the job; that he has provided level operating conditions, and that the pumping unit involving the gears is lined up with the job to be handled.

Most of these things are done properly when the installation is made, but checks should be made to see that operating equipment *stays lined up* — that the ideal conditions sought when the installation is made are kept ideal. Among the things to watch for are settling of foundations, wear in bearings and the development of loose bolts.

In the problem of lubrication the company should study the lubrication needs of the equipment in use (manufacturers usually have recommendations to make) and the crew should see to it that the recommended lubricant is used regularly.

CLIMAX FURNISHES AUTHORITATIVE ENGINEERING DATA ON MOLYBDENUM APPLICATIONS.
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SAFETY - ECONOMY - UTILITY
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The size with 3" bottom connection will allow tools 1¾" OD to pass through it.

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HOUSTON, TEXAS

Hunt Oil Tool Company recently completed a building expansion program at its Houston plant that included one new shop building, and a modernistic office. The new shop building houses facilities for reworking drawworks and other heavy oil-field equipment. Engineering, accounting and executive offices are housed in the new building, which is air-conditioned.

acknowledged and specially designed "ideas for victory" pin sent to the operator with his name engraved on the front. The reverse side carries the words, "awarded by Warner and Swasey." In many places, the management was aware of the good ideas initiated in their shop by some of the employes. Many executives have asked that the pin be sent to them so they could make the presentation in a shop ceremony.

Diesel Engine Corporation Announces Change in Name

The Rogers Diesel and Aircraft Corporation recently became the new corporate name of The Cummins Diesel Engine Corporation of New York. The corporation operates two New York plants, 1120 Leggett Avenue, and 724 Garrison Avenue, with offices situated at the former address.

Originally formed in 1934 as a distributing organization for Cummins diesel engines, the corporation has since enlarged its scope of operations and its facilities to the point where a new corporate name was needed to describe more adequately the nature of its business.

Although continuing as a distributor for Cummins engines, Rogers Diesel and Aircraft Corporation now represents Enterprise and Sheppard Diesel engines also, and, in addition, manufactures a complete line of gasoline and diesel-driven generator sets and power and pumping units.

Twin Disc Moves Hydraulic Division

New machines and new facilities are now being installed in the Twin Disc Clutch Company's plant at 1310 Preston Street, Rockford, Illinois, and a considerable increase in the number of employes will take place very shortly, it has been announced. The expansion results from creation of a separate division of Twin Disc Clutch Company to handle the development, production and sale of hydraulic drives and torque converters, formerly a department of the company's operations at Racine, Wisconsin.

R. M. Schaefer has been named vice president in charge of the hydraulic division of the company, all of the activities of which now will be concentrated in Rockford. The products to be manufactured involve fluid-type transmissions. This development has been carried on extensively by Twin Disc Clutch Company for the last five years. A number of these units, which were previously produced in Racine, are now in service in a wide variety of equipment. Further engineering research and development will be carried on by the staff of engineers recently transferred from the Racine plant to the laboratories at Rockford.

P. H. Batten, one of the men who originally organized the Twin Disc Clutch Company in 1918, is active as president. Assisting Schaefer in Rockford will be R. P. Exten, plant manager, J. R. Murphy, purchasing agent, and R. T. Rehwald, assistant secretary of the company.

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